THE ETHICS IN RADICAL INNOVATION

INSIGHTS INTO THE HEARING IMPLANT INDUSTRY

Thesis submitted in accordance with the requirements of the University of Liverpool for the degree of Doctor of Business Administration by

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Key Words: Ethical Positions, Hearing Implants, Radical Innovation, Organisational Dynamics

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“A man who wants the truth becomes a scientist; a man who wants to give free play to his subjectivity may become a writer; but what should a man do who wants something in between?”

Robert Musil, The Man without Qualities, 1930

“The standpoint of the beholder pertains to the described subject, as the viewpoint to the landscape.”

Michael Oppitz, 1975

ABSTRACT

How do ethics and morals shape innovational business needs if a manufacturer of hearing implants decides to establish its own clinics? In this doctoral thesis I address this radical innovation venture from the immersed researcher perspective and as the responsible change agent. I utilise emergent action research to solve inherent organisational susceptibility for project failure. The points of interest are the ethical positions of specific stakeholder groups, the organisational dynamics as well as potential paradoxes that might occur.

My inquiry features processes of action cycles, where I apply behavioural science and combine it with organisational knowledge. At the same time, I bring about change in my company, which has emerged from my actionable inquiry. For this I utilise current literature in management research, ethics, morals and innovation. My research design adopts a phenomenological Action Science approach, building on an ontologically relative and epistemologically constructive view with a pluralist and pragmatic twist. This approach ideally reflects and combines both my personal scientific belief system as well as my company's worldview on organisational research.

Based on this conception I thematise my pressing workplace problem on potential project failure by asking research questions on how ethics shape innovation. This comprises questions on the ethical position of stakeholders, potential organisational impacts of my radical innovation venture and paradoxes that might occur. I address these research questions with mixed methods, including quantitative questionnaires and semi-structured interviews.

The outcomes, generated through cycles of action and reflection, show that my research participants' mean ethical positions have similar ethical scores as the globally validated average, while individuals' scores differed significantly in partial aspects of idealism and relativism. I characterise my participants as pragmatic practitioners, with a minor absolutist tendency.

My research did not unfold insurmountable paradoxes between ethics and innovation. This thesis proved that the venture of setting up company-owned clinics was ethically sound, with conditions. The conditions mainly address the finding that ethical norms varied across the globe. Accordingly, leaders of our established clinics should be hired locally to understand and effectively manage the different demands in various regions in the world optimally. This outcome of my research had organisational implications and led to action which took the form of replacing the lead position of our pilot clinic and respective adaptions of hiring policies.

Emergent and iterative cycles of action and reflection triggered this respective organisational change. Subsequently business models were suggested based on service and patient outcomes. Additionally a discussion process regarding our corporate personality and an even stronger focus on patients was initiated. Finally I suggest further action cycles and research into our corporate belief system with additional stakeholders to further develop our corporation and myself.

STATEMENT OF ACADEMIC INTEGRITY

I hereby declare and confirm with my signature that this doctoral thesis is exclusively the result of my own autonomous and honest work based on my research and literature published, which is seen in the bibliography used.

I also declare that no part of the paper submitted has been made in an inappropriate way, whether by plagiarising or infringing on any third person's copyright.

Finally, I declare that no part of the paper submitted has been used for any other paper in another higher education institution, research institution or educational institution.

Innsbruck and Liverpool, 14 December 2018

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CHAPTER ONE

INTRODUCTION

In this thesis I uncover how ethics, morals and character shape a radical innovation strategy developed and applied in my working environment. The professional environment of the venture, the hearing implant industry, is a niche in the medical devices industry. I discuss relationships and paradoxes between ethics and innovation experienced in a setting where a hearing implant manufacturer has started to establish its own specialised clinics as a downstream vertical integration process. This approach is radical in nature and unprecedented both in the literature and in practice. As the inventor of the project I approach this thesis as an immersed researcher, who facilitates the project and the respective change (Donnenberg & De Loo, 2004). My approach follows the guidance on actionable inquiry, provided by Coghlan (2011, p. 54), who described actionable inquiry as *"the twin tasks of bringing about change in organizations and in generating robust, actionable knowledge".*

I do this under the first person's perspective to underline the phenomenological and narrative nature of my action research (Creswell, 2013a). I strive to add to the existing knowledge base of ethics and innovation interaction as well as to develop evidence-based know-how that is actionable and applicable in my specific work environment. Alongside Coghlan's view (2011) I additionally base this thesis on the thinking of Shani and Pasmore (1985, p. 439): *"Action research may be defined as an emergent inquiry process in which applied behavioral science knowledge is integrated with existing organizational knowledge and applied to solve real organizational problems. It is simultaneously concerned with bringing about*

change in organizations, in developing self-help competencies in organizational members and in adding to scientific knowledge. Finally it is an evolving process that is undertaken in a spirit of collaboration and co-inquiry." This reflects my approach well. I am emerged in the inquiry process, generate robust actionable knowledge and apply it in a behavioural way by utilising generated and existing organisational knowledge. In order to address the overall process and the experienced action loops I have structured this thesis into six chapters.

Chapter One comprises an outline of my personal workplace environment, the industry and my role as an immersed researcher and facilitator of the project. It is from this environment that I observed and began investigating the workplace problem and deduced my main research question and sub-research questions accordingly.

Chapter Two sets the methodological ground for my research. I start with a comprehensive overview on different action inquiry modalities and then describe and justify my underlying action-oriented research philosophy and strategy which utilises essential parts of Action Science (Argyris, et al., 1985). My approach is broadly phenomenological (Creswell, 2013a) and it employs mixed methods (Onwuegbuzie & Leech, 2006). I picture and reason data collection through questionnaires and semi-structured interviews with experts and connect back to the research questions. I furthermore address the limitations of my chosen approach.

Chapter Three prepares the scientific ground for my research in action through review and synthesis of the relevant literature. I utilise three blocks of literature that emerged through action and reflection cycles in this work. Firstly, I reflect on contemporary management research and provide an outline of my underlying belief system. Secondly, in the ethics section I synthesise the literature of ethics, value and morals in connection to innovation. My specific focus hereby lies in the connectedness to the character of involved people, to stakeholder thinking, and to

sustainability in an international context. The third part of the literature review encompasses the innovation's perspective, specifically in connection to change, leadership, decision making and organisational dynamics. As there is no specific literature available that addresses my workplace issue directly, I additionally synthesised literature from analogous settings to relate and link the sections.

Chapter Four is reserved for describing cycles of action and the findings of questionnaires and semi structured interviews. I do this through statistical analysis, coding, synthesizing and interpreting of the questionnaires and semi-structured interviews. Grounded analyses (Easterby-Smith, et al., 2012, p. 166; Flick & von Kardorff, 2000) from transcripts of recorded interviews were applied. Data analysis and synthesis were emergent, iterative, complex and creative. The chapter provides an extensive discussion of the findings for the sub-research questions as well as the main research question. My discussion contains meaning- and sense making of the results (Weick, 2006) as well connecting these findings to the literature. I developed the sense and the meaning of my main research question from the specific sub-research questions to the general (San Francisco Edit, Scientific, Medical and General Proofreading and Editing, 2017).

Chapter Five provides a story-telling insight into the action planned and taken in order to add meaning to the found outcomes. I provide this additional chapter on action to emphasise the specific nature of my research, which is based on emergent actionable inquiry. Thus, I picture the comprehensive reflexive process as the basis for the organisational action taken, which I had not expected at the beginning of writing this thesis. While such twists are common in action research (Coghlan & Brannick, 2014), in retrospect it has induced unforeseen organisational dynamics.

Chapter Six finally completes this research work with a conclusive discussion, where I summarize the results and the meaning and sense I have extracted. I

interpret my findings in connection to the research questions and to the core of my inquiry. I reflect on my action in research, how it supported my managerial practice as well as the contribution to the knowledge base I have made. Finally I address the limitations of my outcomes and close with suggestions for further research and action.

1.1 THE ENVIRONMENT AND MY ROLE AS RESEARCHER

I am working for corporation M, a leading manufacturer in the field of hearing implants, based in Austria. Hearing implants are used when ordinary hearing aids are useless for patients (Hochmair, 2013). Cochlear implants, the best known appliances in this field, are surgically placed into the skulls of deaf patients and thus far are the only working apparatuses that can artificially replace a human sense in a practical way (Clark, 2003). Our corporation's core competences have been the research, development, manufacture, selling and service of such devices. From a global perspective and at this point in time the industry is still a high-margin market (Raine, et al., 2016), which is shared by mainly 5 corporations. My own corporation belongs to the 'Big Three', challenging the market leader from Australia from the second position. We are headquartered in Austria, employ over 1.800 people and are active in 117 countries.

Unlike our competitors, who are publicly listed, we are a 100% privately- and family-owned corporation. A recent trend in our field has been the merger of hearing implants with the classical hearing aid business. My own company applies a different strategy and has structured our business as a stand-alone, vertically integrated

hearing implant corporation. We collaborate with all hearing aid manufacturers (MED-EL, 2016), as the patient pathways and reimbursement situations are profoundly different in the majority of markets. With our strategy of trying to stay independent as a hearing implant corporation and the experienced lack of comprehensive services in several markets in the world, we have decided to set up our own clinics. These clinics offer all-encompassing services for patients – from diagnostics, to treatment and surgery, to the device itself and finally to the speech- and language (re)habilitation. The second urgent motive to think of such a project was the fact that patients, in specific areas in the world, have suffered from sub-optimal outcomes due to the lack of comprehensive services. A problem I encountered was that there was no literature or practical experience available on this topic and more specifically with regard to the question of how ethical it was if a manufacturer of medical devices runs their own clinics? Indeed, would ethics even have a part in shaping the nature of the project?

1.1.1 THE WORKPLACE ENVIRONMENT

The idea of setting up company-owned clinics emerged through repeated cycles of discussions of my CEO, who is also the owner of the corporation, and me around the year 2010. We were fully aware of the radicalism of the idea and the potential impact it could have for our business were manifold. Firstly, it could have harmed our company's relationship with existing customers and hospitals: How would they react if a supplier became a competitor? Secondly, if successful, such a project has the potential to completely shift corporate identity and corporate personality. Thirdly, if unsuccessful, as are the majority of radical innovations (Chang, et al., 2012): How do

we manage the financial cost and potential loss of reputation? And fourthly, if successful: How do we overcome inertia and resistance within our company?

Additionally we were concerned about the lack of academic knowledge that was available about our very specific venture. How could we apply actionable inquiry in a positivist belief system like ours? We decided to start a pilot project in the Middle East, where we would not have anything to lose at that time. At the same time we wanted to keep the venture strictly confidential. Thus in the beginning, our venture was driven by a small team and by request of my CEO only a few of the senior management colleagues were privy (Kumar, 2004). In addition we prepared to set up a separate business unit, disconnected from the core business to better overcome inertia and resistance as well as to have a new mind-set in the team (Christensen & Overdorf, 2000). The new mind-set was necessary, as running a clinic and treating patients differs significantly from producing devices for hospitals. We simply needed different skills in our new project. From the strategic point of view we declared the new business unit as complementary and not competitive to existing businesses of our firm. This was a clear concession to our corporate striving for organisational harmony and was intended to limit inertia and resistance.

I was given responsibility for the development and implementation of the venture and became the facilitator of the project that potentially would induce change in our corporation. With a small team, a plan for the first clinic was developed. We rented space in Dubai, equipped the clinic and started with the first staff. After a bumpy and uneven learning curve with the pilot clinic, we established two more clinics in completely different markets; one in Canada and one in the Caribbean. Up to this point the project was mainly confronted with questions of technical nature or business related issues. It was not until the set-up of the fourth clinic in Italy, when all of a sudden the issue of ethics appeared on our scene officially.

Until then we have felt secure with our belief systems and ethical behaviour. It was never questioned and we took it for granted, based on our truly lived corporate culture and the involved persons. The regional governmental authorities in Italy suddenly forced us to reflect on our ability to guarantee ethical behaviour in a Hippocratic sense. They prompted us to take a stand and explain how we put patients' needs before economic interests. The necessity to formulate a juridically sound statement triggered my realisation that we needed to consider the impact of ethics and morality in our innovational project more profoundly. Reflection onto the innovational or business aspect was not enough, as the lack of clarity and trustfulness obviously could potentially lead to loss of, for example, governmental reimbursement or cancellation of agreements with insurances. Obviously radical innovation and ethics are interacting in a setting like mine. This was the initiation moment of this research in order to find out how ethics shape and justify my radical innovation project. It was necessary to inquire what is allowed in healthcare (Galician, 2013), how such a project aligns with the Hippocratic Oath that might induces tensions between patient safety and economic needs (Jotterand, 2005) and to finally extract whether such an approach is morally sound (Badaracco, 1992).

1.1.2 ROLE AS A RESEARCHER

This doctoral thesis comprises the connection of organisational and management research to actionable inquiry as utilised in the doctoral programme of the University of Liverpool. The main aim of this work is to address how ethical considerations and influences shape radical innovation, to generate actionable knowledge that can be applied and reflected. My goal is to bring about organisational change and to

contribute to the existing knowledge about the interconnectedness of radical innovation and ethics.

As a researcher I do this as the facilitator of change (Lewin, 1946) in an innovation context. At the same time I remain responsible for the implementation of the project as a member of the company's senior management board who reports directly to our CEO. This duality was a major concern in our corporate environment, which is heavily oriented towards classical and detached natural sciences research. This inherent conception of research in our company had an influence on how I approached the existing literature and also how I structured my research design. I address my approach of bridging this thinking with action research in the methodology chapter under *2.2 Applied Action Approach and Strategy*.

The broad variability of actionable inquiries (Zuber-Skerrit, et al., 2015; Raelin, 1997) enabled me to develop a research design that suits my personal preferences, the organisational needs as well as our corporate belief system. Furthermore, we needed to integrate this new venture into our corporate structure. *Figure 1 Organigram and Embeddedness in the Corporation* illustrates the embeddedness of my venture in our corporation. We have established a separate business unit in the firm in order to stay flexible enough and to overcome expected inertia in the comparably huge existing core business.

This new business unit is responsible for developing and establishing new clinics as well as to back up the operations of the already established company-owned clinics. I am formally the director of this newly found business unit. This role includes the lead of a highly specialised team at our firm's headquarters as well as the direct line reporting of all established clinics to me. From the research point of view I am immersed in the project and therefore not distant and objective but rather

pragmatically subjective as described in depth in Chapter Two (see *2.2 Applied Action Approach and Strategy*).

FIGURE 1 ORGANIGRAM AND EMBEDDEDNESS IN THE CORPORATION

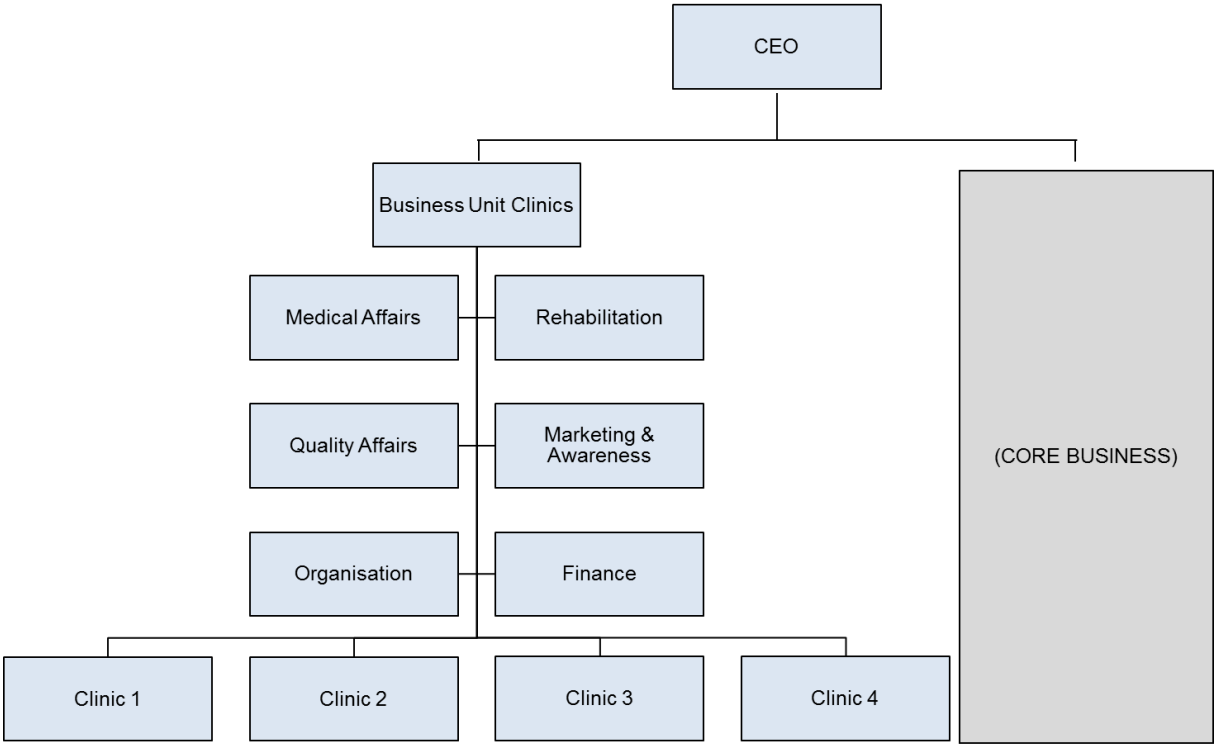


Figure 1 pictures the newly established and separated Business Unit in corporation M

I conducted this doctoral research as the principal investigator, who performed the data collection and analysis and at the same time was responsible for the prosperous development of the newly established business unit. My role thus was dual, as described in action research literature (Sandaunet & Trondsen, 2009). In conducting the research I had no ordering power over interviewees, who contributed to this work. On the other hand I was in constant professional exchange with all interviewed persons before and after conducting this doctoral research. Half of the interviewed persons were senior management colleagues of mine for years. The other half consisted of internationally renowned surgeons from our field and from different continents with whom I have a long standing professional relationship

through my work as key account manager in the firm. This implies a history of both open and hidden politics (Morton, et al., 2004) that might have been present with and from all involved.

One of my literature anchors, Kotter (1995), heavily supports the necessity of 'good' politics for successful change projects. Throughout the research I sought to address the duality of my role as well as the necessity of doing politics through reflection in action (Coghlan & Brannick, 2014; Greenwood & Levin, 2007). The action cycle for implementing organisational change (see *5.5 Learning from Reflection and Action*) emerged from reflective discussions with my research participants and my CEO.

1.2 THE WORKPLACE ISSUE

The idea of establishing company-owned clinics emerged through a complex responsive process (Stacey, 2011) between my CEO and me. While we were clear about the need and demand from patients for comprehensive services from internal data and estimates, we were uncertain whether to take the organisational risks involved. Throughout a period of more than two years we had discussions on whether it was worth taking the risks or not. During a long-haul flight to Tokyo we finally decided to give the project a try and start with a pilot clinic, from which we could learn. While the main thoughts circled around feasibility, competition and chances for success we already expressed our uncertainty of the compatibility of 'being a manufacturer and, at the same time, treating patients ourselves'. Is it ethical if a corporation run their own clinics? Would the dual role yield insurmountable

tensions? How could we deal with external competitive forces, like existing hospitals? How would we deal with internal competitive forces and politics, as we might attack or cannibalise existing sales-channels?

In technical terms the core of the overall workplace issue can be described as a radical service innovation project in the hearing implant industry through downstream vertical integration towards the patient. To date such a venture has not been described in the academic literature or in practice. Only two different cases in the medical devices industry have been loosely documented: one in the dialysis industry (Korine, 2000) and a second one, less integrated towards the patients, in the heart-diseases area (Graham, 2013). This obvious gap in literature as well as in practice is both seductive and dangerous. It is seductive, because it provides enormous space to contribute to literature and practical knowledge. It is at the same time dangerous, as there might be a reason why nobody has described or dared a comparable venture.

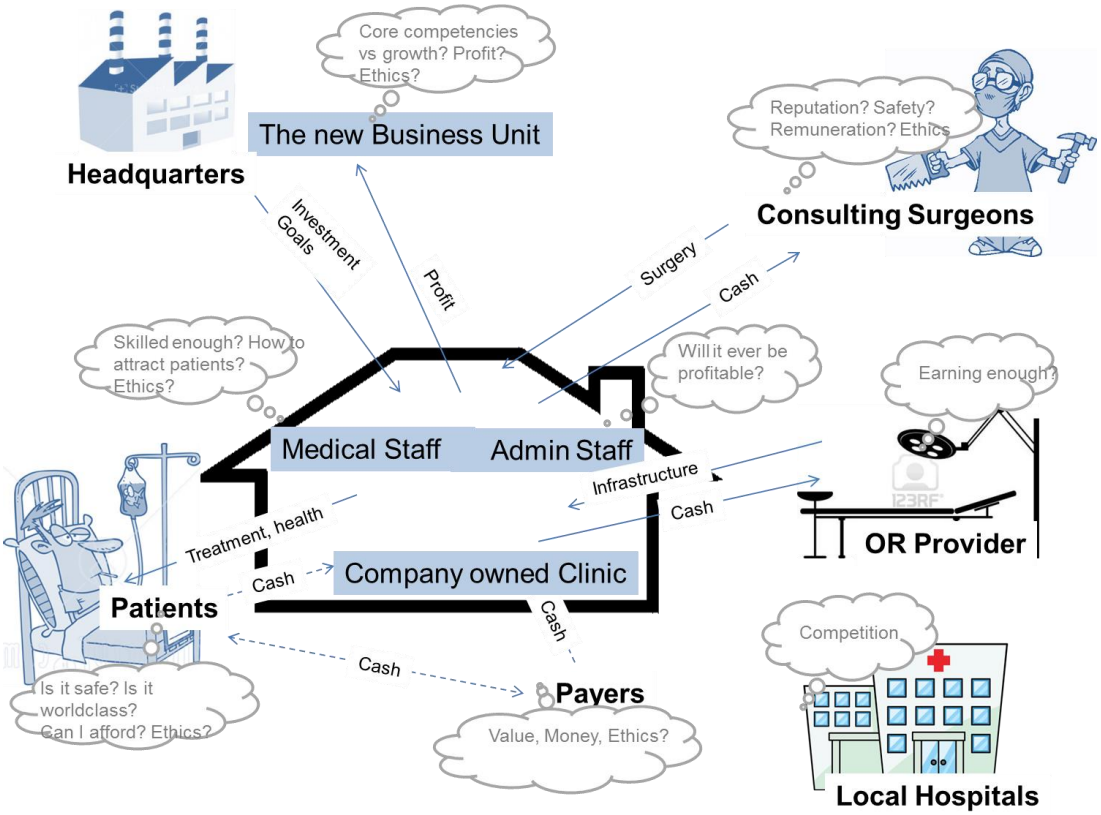
From the research perspective I address these issues by utilising a phenomenological research and writing approach, where I sought to unfold the essence of made experiences (Creswell, 2013a) with a strong tendency towards narrative – see *2 Research Design & Methodology*. In my venture the danger of failing, like a huge portion of innovational projects (Bailom, et al., 2013; Christensen & Overdorf, 2000), is mainly of a financial and technical nature. From the action research perspective in a phenomenological way it still would provide essential descriptions, outcomes and learnings as well as experiences.

1.2.1 SYNTHESIS OF THE WORKPLACE PROBLEM

While my issue potentially would open a wide field of research, for this doctoral research I am mainly interested in the influence of ethics on innovation. How do ethics shape innovation projects like mine? A broader topic for this thesis would have left this thesis too vague and reflection and action would have stayed on the surface. My CEO and I already discussed interdependentness of ethical behaviour and the necessity of earning money during the development phase of this venture. Additionally we were interested in how our stakeholders perceive the compatibility of driving a company and treating patients at the same time? What is the influence on our corporate organisation and personality when we need to consider ethics from a new perspective, analogous to medical doctors, who swear the Hippocratic Oath (Jotterand, 2005)? Finally I was interested in whether paradoxes or contradictions emerge when the interactions of innovation and ethics are examined within my workplace content.

To me it seemed that doing good for patients at all times could either show polar opposites or at least paradoxes. This setting is complex and messy as regularly observed in action inquiries (Pedler, 2008). I therefore found it useful to list and structure the involved stakeholders, which can be pictured in a simplified way through a rich picture (Monk & Howard, 1998), as displayed in *Figure 2 Rich Picture of Involved Stakeholders*.

FIGURE 2 RICH PICTURE OF INVOLVED STAKEHOLDERS



The main stakeholders for a newly set up company-owned clinic, determined in a team discussion, are:

- Patients, who seek safety, quality, affordability, trust.
- Headquarters' managers who are concerned in core competencies, profitability, growth, risks, competition and ethics, especially sales managers who could be both supporters and/or competitors for new patient acquisitions.
- Consulting surgeons and independent experts in the field. Our new clinics utilise a number of them for performing the specific surgeries in a fly-in and fly-out manner.
- Infrastructure providers with whom we collaborate, for example by renting operational theatres.

- Local hospitals that see our clinic approach as competition as they might provide their own hearing implant programmes.
- Payers such as public or private insurances or sometimes families who pay out of pocket.
- Employees in the clinics, which mainly consist of medical and administrative staff.

This environment provides the foundation to extract the specific workplace problem I address in this doctoral research.

While the pilot project and the three subsequently opened company-owned clinics have provided insights into the feasibility and profitability, we failed to address the matter of interaction between ethics and strategy. This topic appeared during the negotiation with a public health authority for reimbursement of our services with the recent fourth clinic. The situation of being both manufacturer and healthcare-provider at the same time was about to become a deal-breaker. In essence the public health authority induced a severe crisis to our business model through questioning the sheer basic idea. They denied our ability to distinguish between moral needs to treat patients versus the necessity of being profitable. While we managed to win through this negotiation, it became clear that we needed to professionalise our knowledge and to establish solid arguments. Otherwise future projects, or even existing clinics might be in question.

In that sense, this doctoral research focuses on two main stakeholder groups from which I sought to gather insights. Firstly senior management colleagues from corporation M were invited to share their views on ethics and innovation. Secondly, highly renowned consulting surgeons were approached as part of this action inquiry to provide their perspective from the expert side. With this choice I sought to cover

the perspective of two main stakeholders in the given workplace environment. In order to develop a truly comprehensive picture it will be necessary to perform further actionable inquiry, for example with other stakeholders. However, as a starting point in this journey I decided to begin with those two groups.

1.2.2 FORMULATION OF WORKPLACE PROBLEM AND RESEARCH QUESTION

As described above, one of our major concerns was the susceptibility of project failure, simply due to the fact that we never enquired into the interconnectedness between ethics and innovation. In this section I therefore develop the workplace problem and the main research question accordingly. Later in this thesis I describe how I addressed this workplace issue through phenomenological, narrative methodology and style (see *2.2.1 The Approach* and *3.1.5 The Underlying Belief System*). I developed the respective description of my workplace problem (Creswell, 2013a) in order to address the experienced susceptibility of the success of my project.

Workplace Problem:

The lack of reflection about how ethics shape the radical innovation nature in our project of setting up company-owned clinics could lead to an increased susceptibility for project failure.

This workplace problem indicates the necessity of research into my venture's specific issues and it furthermore enables action and, if necessary, organisational change. In other words: the workplace problem was the foundation of my main research

question (RQ), with the objective to describe the essence of made experiences (Creswell, 2013b) and to make sense of made experiences (Worthington, 2010) in a phenomenological way. The development of this workplace problem was the result of double loop learnings (Argyris, 1977). Initially I shared this idea with other students in the doctoral courses. This process was followed by discussions with my CEO and finalised through reflection with my supervisor.

Research Question RQ:

How do ethics shape radical innovation in a downstream vertical integration project in the hearing implant industry?

The specific phenomenon I examined was the shaping influence of ethics on the applied innovational strategy in my environment of setting up company-owned clinics. The lack of knowledge about this interdependentness was the initial trigger for this actionable inquiry. According to Onwuegbuzie & Leech (2006), this formulation indicates the preference of qualitative research over quantitative research as adopted in my methodology description through the utilisation of the indicative word “How” (see *2.2 Applied Action Approach and Strategy*). It still contains an indicator for quantitative research, as it refers to the relation between two parameters. This formulation indicates relationship, potentially interdependence and enables descriptive phenomenological research (Creswell, 2013b, p. 484).

It was important for me to be able to carry out research that can happen in both worlds – the rather qualitative action driven inquiry, as well as the tendentially quantitative research, which reflects our corporate belief system. In chapter *2 Research Design & Methodology* I describe in depth how I found a bridge between

these two worlds through the application of Action Science (Argyris, et al., 1985; Raelin, 1997) that is ideally suited for my environment.

1.2.3 FORMULATION OF SUB-RESEARCH QUESTIONS

One problem remained nevertheless: I enquired into an academically unexamined field of research. To address this, I decided to position my phenomenological sub-research questions into academically and individually well-explored areas and added a third dimension which addresses paradoxes. Firstly I sought to examine the ethical positions of main stakeholders. Secondly I wanted to address the organisational impact that I experienced. As a third perspective I strived to establish a view onto paradoxes between the two areas of radical innovation and ethics in my specific environment. I therefore utilised three sub-research questions which address my main points of interest and would enable me to apply action. Their phenomenological wording is based on Creswell's idea to describe *the essence* of experienced phenomena (2013b) and aligns with suggestions for phrasing from Worthington (2010, p. 2) with the objective of meaning-making of *'affective, emotional and intense human experience[s]'*.

With the first sub-question I shed light onto the experienced ethical position of specifically involved stakeholders.

Sub-question RQ 1:

What are the experienced ethical positions of main stakeholders?

I found it necessary to learn more about the belief system of main stakeholders in order to extract better understanding of our venture and to enable action, reflection and organisational change if necessary.

With the second sub-question I focused on the organisational impact of my workplace issue.

Sub-question RQ 2:

How has our corporation adapted and evolved as a result of this action research?

With this question I sought deeper insights and feedback about how our company 'reacts' to the radical nature of my venture. What can be learnt, changed and adapted for future?

With the third sub-question I addressed potential paradoxes in my project.

Sub-question RQ 3:

What are the paradoxes between ethics and innovation?

Finally the investigation into paradoxes was important to me. If paradoxes occurred I found it of great help to better understand and potentially manage my venture of setting up company owned clinics.

The core aim of my research was to establishment of in depth insights into the influence of ethics on innovation and paradoxes in my workplace, to gain knowledge that could be put to action and to contribute to the existing knowledge base in both

academia and practice. It enabled me to reflect on belief systems of main stakeholders and to derive actionable knowledge, which allows our organisation to improve (1) the overall concept, (2) the already existing company-owned clinics and (3) to be better prepared for the establishment and implementation of upcoming new clinics.

RQ1 enabled me to examine the ethical position of senior management colleagues and stake-holding external surgeons. With RQ2 I reflected on experienced organisational impacts both in headquarters as well as in individual clinics based on the innovation strategy. With RQ3 I searched for potential paradoxes, or even contradictions of the venture. The phenomenological Action Science set-up of my research enabled both rigour of academic output as well as practical relevance (see *2.2 Applied Action Approach and Strategy*).

CHAPTER TWO

RESEARCH DESIGN & METHODOLOGY

In this chapter I develop the foundation of the research design and methods I utilised. I do this by describing and justifying the set of procedures I applied in an environment of action research and action learning. Later, in chapter *3 Literature Review and Synthesis,* I set the ground for the shaping nature of ethics in radical innovation from the literature perspective as a basis for my doctoral research. Both chapters depend on each other and have emerged through iterative cycles of reflection and achieving convergence.

The following chapter of research design and methodology contains a detailed outline of how I planned and undertook the inquiry. I provide a solid reasoning for how the collection of information and data was substantiated, organised and finally prepared the foundation for actionable change. This chapter is structured into four sections.

In the first section I provide the necessary groundwork to understand action research. This is important as any actionable inquiry is systemically opposite to classical research (Raelin, 2009). Action research is based on a different belief system as it is subjective and the researcher is immersed in the subject of research (Coghlan & Brannick, 2014). The approach of the action researcher and the underlying belief system (see *2.1.5 The Underlying Belief System*) must align (Greenwood & Levin, 2007).

The second section describes my specific orientation towards Action Science (Argyris, et al., 1985). Among the action research family, Action Science is closest to classical research (Zuber-Skerrit, et al., 2015) with a tendentially distant researcher role. I furthermore describe in depth the applied Action Science approach and how it aligns, as well as, differs from other action research modalities. A profound justification for having chosen Action Science oriented research is provided.

The third section then gives a detailed insight into the utilised data collection, sampling and analysis methods I applied to address my workplace problem and the respective research questions (see *1.2.2 Formulation of Workplace Problem and Research Question*). Data collection in this doctoral research included semi-structured interviews that targeted different aspects of the developed research questions and a standardised questionnaire on ethical positions (Forsyth, 1980; 2016).

Finally, in the fourth section, I address the matters of research ethics for collecting these data. In addition I discuss the reliability and validity as well as the limitations of the chosen approach.

I consider it of utmost importance to dissect the various actionable modalities. This is necessary, as action research lacks a commonly accepted definition (Greenwood & Levin, 2007). In the next two sections I therefore detail the differences and commonalities of the various modalities and lead to my chosen and suitable approach of Action Science. This path of thinking builds on my underlying belief system, as lined out in *3.1 Management Research and the Underlying Belief System.* It furthermore is grounded on my personal understanding of action research, based on Coghlan (2011) and Shani (1985), which emphasises 'bringing about change' based on robust knowledge. This knowledge based action happens in an emergent process and is applied to result in (practical) solutions for organisations.

2.1 ACTION RESEARCH AS UNDERLYING PHILOSOPHY

This thesis was written in an environment where actionable inquiries are at the core of the research process (Bourner, et al., 2000). Such research in action evolved from the ideas of Lewin (1946; 1947) as a critique of the exclusively experimental nature of social science from that time. Lewin wanted to bring the social sciences closer to practice, make it more relevant and reflexive (Cunliffe, 2004). Action research challenges classical research through *"recognizing that all research is embedded within a system of values and promotes some model of human interaction, we commit ourselves to a form of research which challenges unjust and undemocratic*

economic, social and political systems and practices" (Brydon-Miller, et al., 2003, p. 11). Action research strives to be holistic by encompassing three aspects in one attempt: research, action and participation (Greenwood & Levin, 2007). Action research regularly is performed in iterative cycles of *Constructing Action - Planning Action - Taking Action - Evaluating Action* (Coghlan & Brannick, 2014), comprises double loop learning (Argyris, 1977) and learning in action (Revans, 1972). Unlike critics from the traditional research community (Kieser & Leiner, 2009) research fellows from the action research community believe that the rigour relevance gap is bridgeable (Popper, 1970; Shrivastava, 1987; Evered & Louis, 1981; Easterby-Smith, et al., 2012), especially in organisational and management research. As of today various modalities of actionable inquiry have developed (Raelin, 2009; Zuber-Skerrit, et al., 2015) and no commonly accepted definition of what constitutes action research is available. Traditionalists profoundly criticise this fact as a severe weakness (Donaldson, 2005), while action researchers point out the advantages of such an open, rich system (Bell & Morse, 2013).

I have visited the Annual Action Learning and Action Research ALARA meeting 2015 in Johannesburg, South Africa. Alongside Coghlan (2011) I have recognised that there is still a gap between how action researchers see themselves and how they are seen from the outside world. Action researchers are still broadly excluded from publishing in traditional journals (Greenwood, 2002), which happen to be mainly from an Anglo-Saxon cultural background (Grey, 2010).

In the following I address the different modalities of actionable inquiry and focus on their differences and commonalities to establish a useful overview.

2.1.1 CONTEMPORARY ACTION RESEARCH

Action research differs from traditional, positivistic research (Reason & Bradbury, 2008). Even though criticised by classical researchers, some researchers point to the compatibilities (Stephens, et al., 2009; Olejniczak, 2015) by referring to action research, for example, as a 'science of practice' or 'science of practical knowing' (Coghlan, 2011). Action research *"constitutes a kind of science with a different epistemology that produces a different kind of knowledge, a knowledge that is contingent on the particular situation and which develops the capacity of members of organizations to solve their own problems"* (Susman & Evered, 1978, p. 601).

This is in contrast to classical research, which intends to build universal knowledge. While traditional research seeks to understand, explain and describe the world, action research has an epistemological twist: It additionally seeks to change the world or the individual situation (Reason & Torbert, 2001). Contemporary action research literature reports different modalities and kinds of action research (Raelin, 2009; Coghlan, 2011; Zuber-Skerrit, et al., 2015):

- AL Action Learning
- AI Appreciative Inquiry
- AR Action Research
- AS Action Science
- CAR Collaborative Action Research
- CE Cooperative Education
- CI Cooperative Inquiry
- CP Clinical Practice
- DAI Developmental Action Inquiry
- EAR Educational Action Research

- IR Intervention Research
- LAL Lifelong Action Learning
- PAR Participatory Action Research

Table 2 provides an overview of the main differences between action research and traditional research (adapted from Coghlan (2011, p. 63)).

TABLE 1: DIFFERENCES BETWEEN ACTION RESEARCH AND TRADITIONAL RESEARCH

	Traditional Research	**Action Research**
What is the aim of research?	Testable theory or universal knowledge or law	Applicable knowledge which is collaboratively generated
Which type of knowledge is produced?	Universal knowledge	Situational, specific knowledge
What is the nature of the data?	Objective, without context	Subjective, embedded in context
How does validation occur?	Measurement, Testing, Repeatable Outcomes	Transdisciplinary, hardly to repeat
What is the researcher's position?	Objective, detached observer	Subjective, immersed change agent

2.1.2 COMMONALITIES OF ACTION RESEARCH MODALITIES

The lack of a commonly accepted definition of what action research is, the existence of different actionable modalities (Cassell & Johnson, 2006) and the complex nature of actionable inquiry as a research modality (Phelps & Graham, 2010) makes it necessary to shed light on the commonalities and (see *2.1.3 Specificities of Different Action Research Modalities*) specifics of the different kinds. Raelin (2009) indicates that

a unifying element of all action modalities is their rather dialectic and non-didactic nature.

I support his argument that the dialectic character emerges from the specific, case-based interaction of the researcher immersed in his or her workplace (Chia & Holt, 2006). Outcomes, ideas and even theories that emerge from actionable inquiry are heavily connected to the specific context (Greenwood & Levin, 2007). They are not generalizable (Greenwood, 2002). Action researchers and learners are immersed into their research. Management- and organisational researchers are not detached. Raelin notes (2009, p. 20) that this leads regularly to questioning of the organisational system or to changes in organisations. Action researchers become change agents (Caldwell, 2003). The immersion into research forces the then change agent to reflect their action (Rigg & Trehan, 2004). This reflection happens not *on* the action as in traditional research but as reflection *in* action (Schön, 1983). Learning in action is facilitated (Cho & Egan, 2009) rather than frontally taught (Marquardt & Waddill, 2004). Researchers act as mediators of knowledge (Revans, 1998). Learning from experiences and learning in research is not only happening through classical positivistic knowledge production in mode 1 (Gibbons, et al., 1994) but also in mode 2 in multidisciplinary teams. It also includes implementation of double loop learning to enhance social discourse as suggested by Argyris (Argyris, 1977).

A remarkable difference to traditional research is action research's explicit welcoming to tacit knowledge (Grant, 2007). This allows extraction of inherent or hidden knowledge that is probably not shared, for example, through formal questionnaires. Outcomes of action research are usually harder to measure or quantify (Coghlan & Brannick, 2014), harder to sell in the traditional academic community, but tendentially practice-based (Raelin, 2009). The nature of action research is often complex, laden with uncertainty and, compared to classical

research, a mess (Calton & Payne, 2003). Tentativeness is characteristic of any action modality. Raelin (2009, p. 23) calls for the necessity that the different modalities *"may need to find common ground with its allied practices that have nurtured some complementary principles and applications".*

2.1.3 SPECIFICITIES OF DIFFERENT ACTION RESEARCH MODALITIES

While there are certain commonalities among the different action modalities, they reveal significant differences and peculiarities (O'Brien, 1998). Each modality has key features. My review includes the most common and important action modalities as exemplified by Zuber-Skerrit et al (2015). It contains deeper details, especially for the relevant approaches and methodologies I utilise in this thesis, described in the methodological section (*see 2.3 Methods of Data Collection, Sampling and Analysis*):

- Action Learning (AL) was introduced by Revans (1972; 1983; 1998) and comprises asking 'fresh questions' (Marquardt, 2007). As utilised in the Doctoral programme of the University of Liverpool, learning is a collaborative experience in sets (Coghlan & Pedler, 2006) as well as a useful tool in the managerial life (Pedler, 2008). Action learning is used in organisational learning processes of 'detecting and correcting errors' and happens in reflective double loops (Argyris, 1977). AL includes emotional aspects to better understand workplace problems (Rigg & Trehan, 2008) and emphasises reflection on one's own biases and presumptions (LeBaron, 2010). This reflection onto oneself as an immersed researcher is critical (Antonacopoulou,

2004) to achieve meaningful outcomes of action in practice (Brook, et al., 2012).

- Appreciative Inquiry (AI) focuses on cooperatively researching and changing organisations or communities (Bushe & Marshak, 2016). It has its origins in Cooperrider's criticism of action research as a mere approach for problem solving (Cooperrider & & Srivastva, 1987).
- Action Research (AR) mainly focuses on solving problems of social nature (Zuber-Skerrit, et al., 2015). It comprises action cycles comparable to project management cycles (Hammer, 2007) of 'planning – acting – observing – reflecting' (Coghlan & Brannick, 2014). Research and action are integrated. AR has a strong focus on problem solving, which is a repeated criticism.
- Action Science (AS) *"is a combination of mainstream science and action research, improving practice through collaboration and reflective dialogue"* (Zuber-Skerrit, et al., 2015). Within the action modalities, AS is the closest one to traditional research. AS comprises Mode 1 intervention as well as Mode 2 inquiry (Argyris, et al., 1985) and allows, for example, research into hidden beliefs in organisations. The researcher is still immersed in the research and acts as the facilitator of change (Holmes, 2008) but stays in a rather distant role compared, for example, to participatory action research.
- Collaborative Action Research (CAR) is similar to AR, but conducted by a group or a set collaboratively, not by an individual researcher (Goodnough, 2011). It focuses on educational inquiry.
- Clinical Practice (CP) is an immersed action modality where the researcher is coming from an external organisation. It thus is rather distant but overcomes the issue of organisational blindness (Reason & Bradbury, 2008).

- Cooperative Inquiry (CI) is similar to CAR with emphasis on making sense in the organisational environments (Reason & Bradbury, 2008, pp. 367-380).
- Developmental Action Inquiry (DAI) is an extension of AS in the field of psychology (Torbert, 2004).
- Educational Action Research (EAR) is the application of AR in the educational field (ALARA, 2017).
- Intervention Research (IR) has emerged from France and addresses deeply dug-in problems in corporate organisations (Raelin, 2009).
- Lifelong Action Learning (LAL) focuses on the aspects of AL in a lifelong context (Zuber-Skerrit, et al., 2015).
- Participatory Action Research (PAR) is comparable to CAR but has its emphasis on inclusion and social justice (Greenwood, et al., 1993) and is used in healthcare (Jagosh, et al., 2012).

The literature additionally utilises terms such as *learning history, service learning or intervention research* to distinguish even further the possibilities of actionable inquiry.

2.2 APPLIED ACTION APPROACH AND STRATEGY

Due to its technical nature the majority of writings in the medical devices industry is positivistic and quantitative, while literature in healthcare has a tradition in qualitative writing (Holloway & Wheeler, 2013). Articles in the field of medicine have traditions for both quantitative methods in the form of evidence based medicine (Sackett, 1997) or as single case studies, regularly with a strong narrative character. PubMed – the online US national library of medicine – includes more than 54.000 articles with the

term ‘case study’ in the title or abstract (2016). This observation fits to learnings I made writing my literature review and synthesis.

My anchor literature in strategy, innovation and business organisation is mainly quantitative in nature, while my cornerstones in ethics are heavily qualitative with strong narrative elements. Since I address a synthesis of business aspects with ethical views I decided to utilise a mixed methods approach as suggested by Länsisalmi et al (2006). Even though the majority of innovation research in healthcare utilises “*cross-sectional designs applying quantitative methods, or multiple case studies applying qualitative methods”,* Länsisalmi et al (p. 66) suggest developing towards multilevel research projects through utilising quantitative *and* qualitative data in a mixed methods approach. My wording of the workplace problem and research questions (see *1.2.2 Formulation of Workplace Problem and Research Question*) covers both the quantitative and qualitative aspect of my research (see *2.2.2 Justification for the Chosen Approach*). I cover the quantitative part of this research by utilising a standardised questionnaire and the qualitative part through semi-structured interviews with experts in the field (see *2.3 Methods of Data Collection, Sampling and Analysis*). The question then was how such an approach could be framed, as Coghlan (2011) postulates the fundamental importance that the chosen action research approach is reflected and based on a suitable research philosophy.

In general, researchers in action research can adopt different research philosophies and paradigms that are suitable for different kinds of inquiries (Saunders, et al., 2012). They emerge from the individual specific ontological and epistemological assumptions of the researcher and his or her environment and topic. In my case I ground the chosen mixed methods approach for this doctoral research on the apparent workplace environment (see *1.1 The Environment and my Role as*

Researcher) and the underlying belief system as described in chapter two (see *3.1.5 The Underlying Belief System*), where I found myself to be

- ontologically relative (Johnson & Duberley, 2000)
- epistemologically constructive (Creswell, 2013a)
- multi paradigmatic (Buchanan & Bryman, 2007)
- pluralist (Willmott, 1993; Tranfield & Starkey, 1998, p. 345).

On reflection I found this insight crucial to better understand my own belief system and to choose an actionable research modality that suits me, while at the same time, also remains relevant to my organisational environment. In my environment, for example, I hardly had received the approval of my CEO to perform a purely subjective and qualitative research. It simply doesn't fit to her personal belief system, which is, subsequently also the mainstream thinking in our corporation. On the other hand, pure classical research is hardly actionable as it is not emergent and the researcher is distant. The chosen mixed methods concept therefore requires an approach that covers positivistic aspects, as provided through my questionnaires as well as needs to reflect the qualitative nature of my research as introduced through my semi-structured interviews. Additionally the approach needs to be compatible with my underlying belief system in the given actionable environment.

2.2.1 THE APPROACH

In recognition of these conditions in my academic environment I chose to apply an Action Science AS approach. It is the best suited method to allow me to answer my research questions and achieve my research objectives. Action Science focuses on the idea that managers can improve organisational effectiveness through inquiry and intervention (Argyris, et al., 1985; Raelin, 1997). It allows Mode 1 (single loop) and Mode 2 (dual loop) research (Raelin, 2009). *"Action Science is a combination of mainstream science and action research, improving practice through collaboration and reflective dialogue"* (Zuber-Skerrit, et al., 2015). It leaves me more distant from the participants while still being immersed as suggested by Greenwood and Levin (2007). Action Science is dialectic, enabling me to learn from interaction and to develop contextualised theory (Raelin, 2009). It endorses action in reflection while still getting practice-based outcomes. A specialty of AS is that it enables investigation and intervention into hidden beliefs thereby improving organisational effectiveness (Raelin, 1997). Hidden beliefs were a factor in the reflective sessions of my research (see *Chapter Five: Reflection On Action and Evaluation*) and a trigger for change and adaption of my venture. Hidden beliefs were of high relevance.

In this doctoral thesis, based on Action Science, I bridged relevance and rigour (Shrivastava, 1987) through reflecting on a corporate setting with myself centred in the middle of an innovational change project. The absence of academic knowledge in my specific field, somehow on a continuum between business and medical ethics, supports the idea of phenomenological research – 'to describe the essence' of experiences and findings (Creswell, 2013a) – with a strong tendency towards narrative writing. Through its descriptive character it allows me to address gaps in the literature by *"wonder[ing] and search[ing] for meaning"* (Kleiman, 2007, p. 7). This

minimised my risk for failure, since it challenged me to build knowledge from scratch. On the other hand phenomenology enables interpretative phenomenology for observations (Lopez, 2004) I experienced. Onwuegbuzie and Leech (2006) provided strong support for phenomenological research in combination with mixed methods. *"Indeed, phenomenological research methods work extremely well as a component of mixed methods research approaches"* (Mayoh & Onwuegbuzie, 2015, p. 91). Lingard et al (2008) explored the utilisation of mixed methods and action research in connection to healthcare research in a heavily cited article. They ask for clear relationship among the methods (sequence, priority) to address a *"complex understanding of a multifaceted phenomenon"* (p. 460).

On this foundation my approach could be visualised for deeper understanding by using an adapted version of Saunders' (2012) research onion.

FIGURE 3 RESEARCH ONION

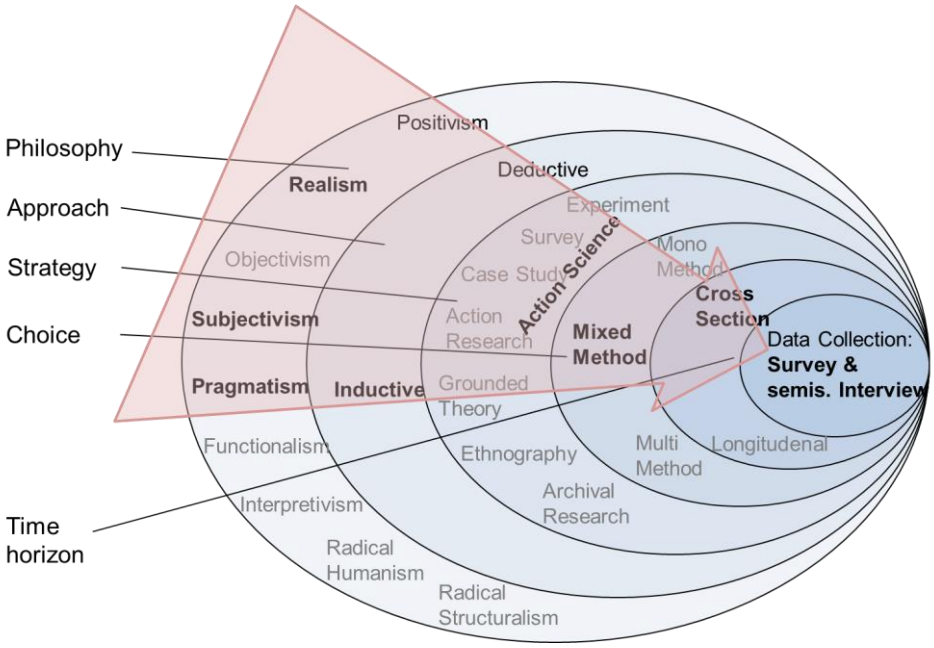


Figure 3 illustrates my personal belief system, based on the Research Onion, adapted from Saunders et al (2012, p. 132).

This visualisation provides an overview of the messy grounds of my action research thesis (Calton & Payne, 2003) from outside layers to inside cores. It condenses the underlying philosophical actualities, the approach and the strategy. It validates the suitability of mixed methods choice and the given time horizon for my actionable inquiry and finally depicts the sampling method and data collection through surveys and semi-structured interviews.

2.2.2 JUSTIFICATION FOR THE CHOSEN APPROACH

My actionable inquiry cannot easily be boiled down to a single pathway as is, for example, necessary in classical research. The research onion in Figure 3 illustrates that, alongside my belief system, this doctoral action research and thesis took place on the classical, tendentially traditional hemisphere, despite having been immersed. The research onion furthermore provides confirmation and validation of the homogeneity and stringency of my approach. As the reddish arrow visualises, the philosophical foundation has positivist as well as subjectivist elements, yet with emphasis on pragmatism and realism, as required in action research (Coghlan & Brannick, 2014), especially if this inquiry has a traditional twist as in Action Science (Raelin, 1997; 2009).

It furthermore displays the suitability of Action Science as the closest-to-traditional actionable inquiry (Zuber-Skerrit, et al., 2015) that also allows positivistic surveys, action research and action learning in an immersed but still rather distant way (Argyris, et al., 1985). The pragmatic views of action research indicate the utilisation of realistic timeframes and methods in my thesis. I aligned this demand

with my cross sectional approach in a mixed methods setting that allowed me to utilise a relatively small sample size (see *2.3 Methods of Data Collection, Sampling and Analysis*) in a realistic effort.

The sampled interviewees and participants allowed me to address my research questions and the experiences I made in my venture. In order to foster actionable organisational change, it is furthermore indicated to enquire into hidden beliefs (Argyris, et al., 1985). Action Science provides me a specific action modality that enables me to expose such undisclosed convictions (Raelin, 2009). From this perspective, it is my objective to enquire into such concealed assumptions with the literature (see *Chapter Three: Literature Review and* Synthesis) as the foundation for a questionnaire *and* semi-structured interviews. Action Science allows staying rather distant from the research subject and therefore also rather distant from the involved set members and participative researchers (the interviewees) but yet at the core of action and facilitating change. Furthermore I followed the rather scientifically conservative route of Tripp (2005, p. 446), who, describes action research as *"a form of action inquiry that employs recognised research techniques [means: 'classical' research tools] to inform the action taken to improve practice".*

The gained insights and organisational knowledge about the shaping nature of ethics in radical innovation were then deepened through an action cycle of construction – planning – taking action – reflecting on action (Coghlan & Brannick, 2014). The outcomes from the questionnaires and the semi-structured interviews informed the action taken and the reflection made to improve our ventures practice in respect to how ethics shaped my radical innovation project as outlined in the research questions. Action Science enabled me to address my research questions in a belief system that fitted to all involved stakeholders and left them comfortable to

join and contribute; but most importantly it reflects my personal understanding and way of thinking about actionable inquiries in the best way.

2.3 METHODS OF DATA COLLECTION, SAMPLING AND ANALYSIS

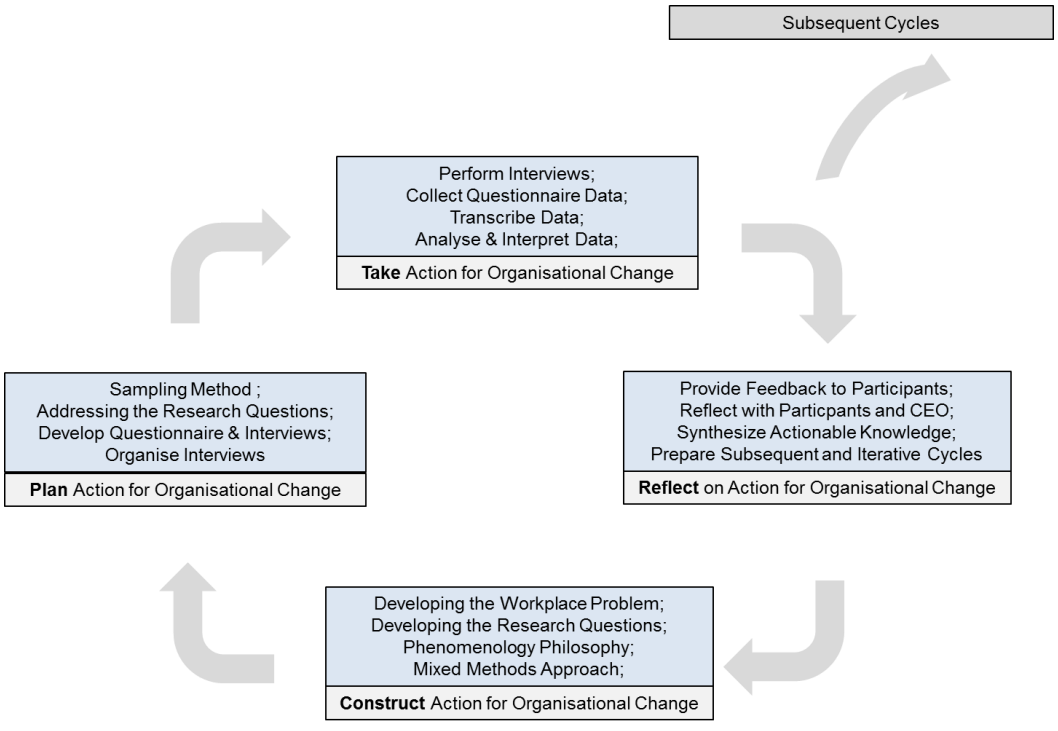
In the introduction chapter I made the case for phenomenological research with a twist towards narrative as methodology and style for this research thesis. Phenomenological research is suitable for quantitative, qualitative and mixed methods research (Creswell, 2013a) and provides the foundational philosophy to approach my research questions. The to-be-extracted data had to be of such nature that it provided insights to the main research question on how ethics shape radical innovation. Data furthermore had to be suitable to address the sub-research questions on the ethical position of stakeholders, the organisational impact and the paradoxes between ethics and radical innovation. Finally the nature of my collected data had to meet the requirements of Action Science (Argyris, et al., 1985) to provide insights into stakeholder's beliefs, mainly in order to adapt my organisation accordingly.

Sample sizes in action research are crucial and were suitable and practicable for my venture and for the underlying philosophy. The specialty of this Action Science doctoral thesis was the mixed methods approach in which I gathered data from individual stakeholders in two forms under one meeting-session: quantitative data from a standardised questionnaire and qualitative data, insights and stories from a semi-structured interview with genuinely targeted questions to guide the interviewees. These participants represented two specific stakeholder groups that

were important for my venture. The first group comprised company externals and consisted of independent senior surgeons. The second group was constituted by senior management colleagues from corporation M. Overall I met and interviewed 10 individuals, who participated in this research.

My Action Science approach was designed as a construct – plan – take action – reflect cycle as suggested by Coghlan and Brannick (2014). I include the guidance of Reason (1999, p. 215) who found that *"Action science writing contains references to single and double-loop learning, but the emphasis on cycles of action and reflection seems less explicit"*. I follow this view in so far as I address the cycles of action in this thesis but clearly emphasise actionable outcomes for change, contribution to the knowledge base and reflection. The main action cycle displayed in Figure 4 reflects the basic process and plan of my research. In each step of this research iterative cycles of deciding, featuring loops of learning and adaptions took place.

FIGURE 4 METHODOLOGY AND ACTION CYCLE



- *Construct Action* mainly comprised developing the workplace problem and the research questions under a phenomenological worldview and with a mixed methods approach.
- *Plan Action* included mainly developing the sampling methods, addressing the research questions and producing the questionnaires as well as the semi-structured interviews.
- *Take Action* emphasized performing interviews, collecting and transcribing data as well as analysing and interpreting.
- *Reflect on Action*, the final step, comprised providing feedback to and personally reflecting on my findings with the participants and my CEO, synthesizing actionable knowledge and preparing the next action cycle.

For the development of the research methodology I went through iterative cycles and spirals of discussions with my CEO while reading the literature. It was crucial for me to establish a methodology that was in line with my personal as well as my company's belief system as outlined in *3.1 Management Research and the Underlying Belief System*. Additionally it had to fit to the chosen orientation towards Action Science as shown in the previous section.

While the development of the workplace problem and of the research questions included cycles of discussion and reflection, the fixation of the research philosophy and the mixed method approach were strongly influenced by reflective cycles from reading literature, which I gradually aligned to my belief system and finally checked for practicability.

FIGURE 5 CONSTRUCT ACTION CYCLES AND SPIRALS

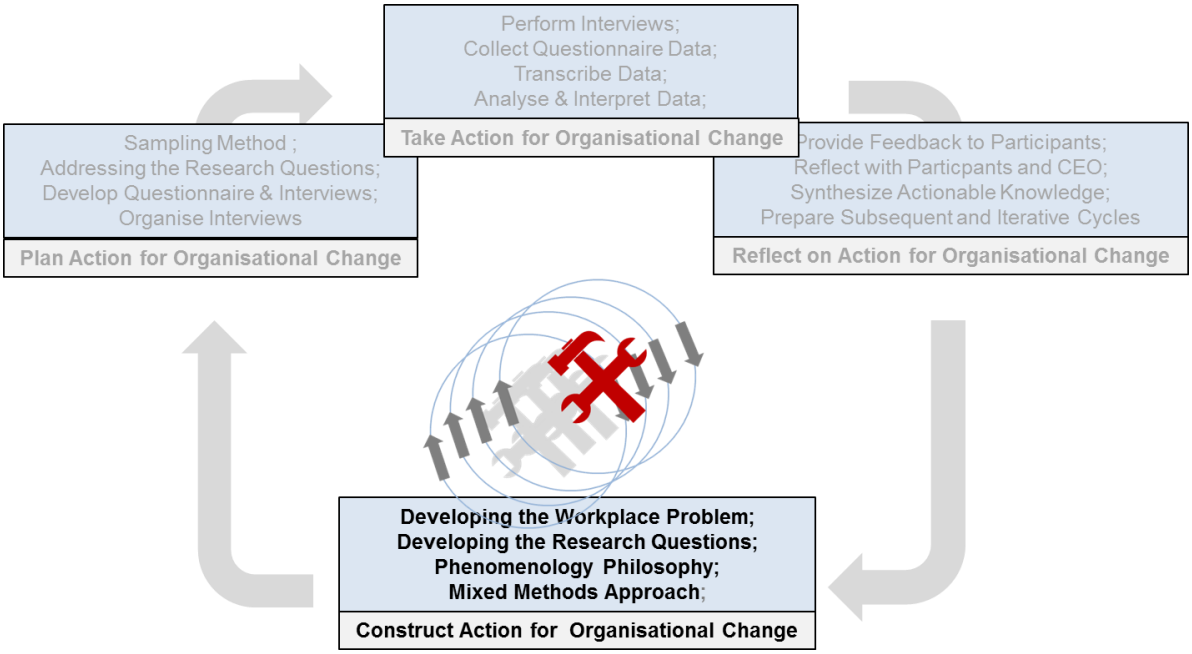


Figure 5 stylises the cycles and spirals I went through to develop the workplace problem, the research questions and the research design of this thesis.

The process of reviewing and synthesizing the relevant literature in chapter three included a number of iterative action cycles itself, mainly during the constructing and planning phase, but also after the reflecting phase. The incremental changes through and during action research forced me to continuously adapt the relevant literature.

The outcome and results of the reflective sessions then provided the basis for actions for change in our organisation as described in *Chapter 4 Action Cycles, Results and Sense-Making*.

2.3.1 DATA COLLECTION

For a research project like mine literature indicates sample sizes of 5 - 30 for phenomenological approaches (Polkinghorne, 1989; Creswell, 2013a, pp. 148-149) to achieve and generate valid outcomes. Alongside these references, I performed quantitative questionnaires and semi-structured in-depth interviews (Kvale &Brinkman (2009) & Rubin & Rubin (2012) as cited in Creswell (2013a, p. 163) for data collection with ten stakeholder individuals. These ten persons were chosen from two groups of stakeholders (see *Figure 2 Rich Picture of Involved Stakeholders*), who are of major influence to my venture and the respective workplace problem. The first group of interviewed stakeholders and participants were five members of the senior management board of Corporation M. The second group consisted of five external consulting surgeons who are well renowned in our industry and from five different countries. All surgeons are head of a department. The senior managers represented the management side of my venture whereas the surgeons covered the medical view. I personally met all interview partners individually. No persons from any other stakeholder group were involved. This procedure might be useful in the future to develop further insights. In these meetings and after an introduction to the topic, I handed out quantitative questionnaires first. After completion I immediately conducted semi-structured interviews (see *Sequencing of Methods* in Easterby-Smith et al, 2012, p.61).

TABLE 2 OVERVIEW DATA COLLECTION AND SAMPLING

	Basis	**Choice**	**Detail**
	Phenomenology (Creswell, 2013a)	Mixed Methods (Onwuegbuzie & Leech, 2006)	Sequence: Questionnaire then Semi-Structured Interviews (Easterby-Smith, et al., 2012)
Quantitative Questionnaire	Forsyth (2016) Appendix 1	20 Standardised Questions on Ethical Positions	Analysis of Ethical Relativism and Idealism of Stakeholders
Semi-Structured Interviews	Genuine Topics Appendix 2	12 Open Questions to Participants	Detecting Insights, Opinions, Stories
Sample Size	N=10	5 External Surgeons 5 Senior Managers	From 10 countries in Europe, North America and Middle East

Table 3 provides a comprehensive overview on the data collection process and its underlying philosophy and approach in this thesis.

For the quantitative questionnaires I utilised a well-established survey on ethical positions from Forsyth (Forsyth, 2016; 1980). It allows the quantitative measurement and analysis of people's individualism and relativism by using a Likert scale of 1-9 with 20 questions. The subsequently following semi-structured interviews featured 12 questions. The Forsyth questionnaire provided the basic understanding of ethical positions and opinions of the participants. With the loosely held semi-structured interviews, I then collected rich data and narratives which allowed me to gain in-depth knowledge (Cunliffe, 2011) of the shaping nature of ethics on radical innovation. This setup furthermore enabled me to detect participants' beliefs as outcomes from the questionnaires and from synthesised interviews which showed slight differences. The

external surgeons were chosen through Creswell's convenient sampling approach (Creswell, 2013a, p. 158), but from different cultural backgrounds. Internal participants, senior managers, were colleagues from senior management in my corporation. In the data interpretation I emphasized qualitative interviews, following the need to prioritize between methods in a mixed-methods approach as suggested by Lingard et al (2008).

The process of data collection and storage in this thesis was performed under the rigid regulations of the University of Liverpool UoL. Not only collection but also storage and security of data are critically important in research. The quantitative questionnaires were provided to the participants in paper and were then securely stored in locked cabinets. The interviews were recorded on electronic devices and then transcribed by myself. These data are available in electronic forms and stored password secured on protected servers. These precautionary measures are part of the ethics approval I received from the UoL's ethics board for this thesis

2.3.2 ADDRESSING THE RESEARCH QUESTIONS

Both the quantitative questionnaires as well as the semi-structured interviews were intended to deliver data and insights to answer the main research question (RQ) on how ethics shape radical innovation. With the Forsyth questionnaires I focused on addressing the first sub research question (RQ1) on the ethical position of stakeholders. The semi structured-interviews were intended to uncover organisational issues, hindrances and potentials for change as addressed in the second research question (RQ2). Finally, I examined paradoxes between innovation and ethics as outlined in the third sub-research question (RQ3) through synthesizing

data from the questionnaires and the interviews. I developed my approach mainly through reflection of literature readings and iterative discussions with senior colleagues in my corporation.

FIGURE 6 PLAN ACTION CYCLES AND SPIRALS

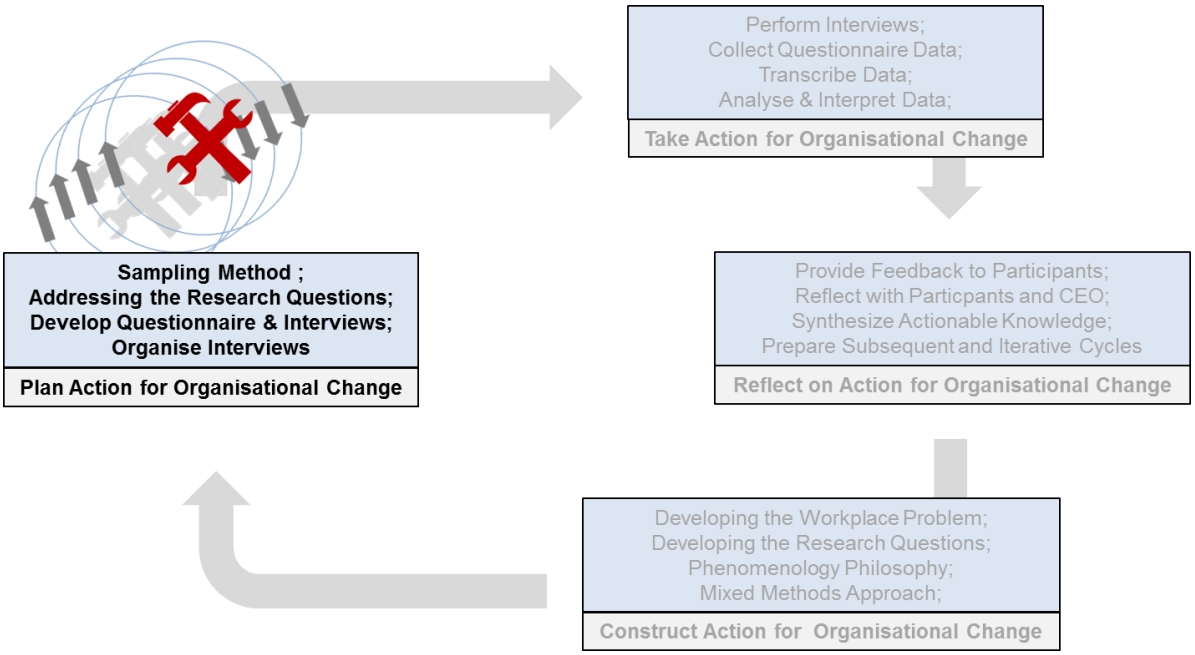


Figure 6 stylises the iterative cycles to develop sampling methods and research tools for this thesis.

Additionally, the reflective action cycles with the participants and my CEO finally contributed to address the main research question and the sub-research questions. The collected data can form the basis for repeated action cycles- constructing - planning - taking action - reflect, as suggested by Coghlan and Brannick (2014). From a sense-making perspective in my induced change project (Maitlis & Sonenshein, 2010), I made sense of the behaviours of the participants by unfolding their beliefs. From the phenomenological analysis point of view I utilised sense-

making, supported by the collection and synthesis of data and extracting its essential meaning (compare Giorgio (2012), cited in Ojala et.al. (2015)).

TABLE 3 ADDRESSING THE RESEARCH QUESTIONS

	Content of Research	**RQ**	**RQ 1**	**RQ 2**	**RQ 3**	**Reference**
	What is enquired?	Ethics vs Innovation	Ethical Positions	Organ. Impact	Paradoxes	Literature Review, (Chapter 2)
Questionnaire (Forsyth, 2016)						
Qu 1-10	Ethical Individualism	**X**	X		X	3.2; (3.3)
Qu 1-20	Ethical Relativism	**X**	X		X	3.2; (3.3)
Semi Structured Interviews (Genuine)						
Qu 1	Morals and Business	**X**	X	X	X	3.2.1; 3.3.1
Qu 2	Character and Individuals	**X**	X			3.2.2; 3.3.1
Qu 3	Character and Organisation	**X**	X	X		3.2.2; 3.3.5
Qu 4	Ethics Internationally	**X**	X		X	3.2.3; 3.3
Qu 5	Hippocratic Oath & Business	**X**	X	X	X	3.2.5; 3.2.6
Qu 6	Risks for Patients	**X**	X		X	3.2.5; 3.2.6
Qu 7	Stakeholders	**X**		X		3.2.4; 3.3.1
Qu 8	Competition	**X**		X		3.2.4; 3.3.1
Qu 9	Organisation	**X**		X	X	3.3.2
Qu 10	Leadership & Corp. Culture	**X**		X	X	3.3.3; 3.2
Qu 11	Decision Making	**X**		X	X	3.3.4
Qu 12	Innovation and Harmony	**X**	X	X	X	3.3.5; 3.2

In Table 4 I show how the utilised questionnaire on ethical positions (Forsyth, 2016) and the genuinely developed semi-structured interviews addressed the research questions. By addressing my research questions I provided information for potential or necessary actions for change in our organisational set up. The Forsyth questionnaire provides a measurable ethical position of the participating stakeholders which was compared and complemented with the data from the interviews. Through the combination of both methods I furthermore was able to cover all relevant issues and, at the same time, opened the opportunity to enquire into hidden beliefs, as indicated in Action Science (Raelin, 1997). This arrangement eventually allowed me

to cover the existing gap in the literature between innovation and ethics in my specific area of interest (see *Chapter Three: Literature Review and Synthesis*).

2.3.3 DATA ANALSYIS

The collected data was analysed under the phenomenological and narrative perspective of this research. This approach featured the display of data in graphs and tables as well as through synthesised texts and narratives (Creswell, 2013a). The problem of qualitative and mixed-methods research in this context was to bring extensive amounts of data and texts into a readable form. I experienced chaos and mess as foreseen by Easterby-Smith et al (2012, p. 168) and have subsequently organised my data into two main groups.

Firstly I analysed the quantitative data from the 10 questionnaires (see *Table 3 Overview Data Collection and Sampling*). Mayoh and Onwuebuzie recently prepared the ground for phenomenological approaches in connection to mixed methods and its quantitative part (2015). They found that *"similarities between postpositivist and phenomenological epistemology and axiology in terms of the scientific reduction, and transcendental subjectivity provide a justification for combining phenomenology with quantitative research methods" (p.8)*. I support and utilise their pragmatic view on phenomenology. They do not draw a distinction between descriptive phenomenology, as developed by Husserl (2013) and the rather recent interpretative phenomenology where findings unfold over time. Alongside their pragmatism I used both views where needed, especially when utilising the Forsyth questionnaire (2016). Very recent research (Waldman, et al., 2017) has proven that phenomenological inquiry into ethics in conjunction with business needs and by critically using the Forsyth

questionnaire on ethical positions is rewarding. The Forsyth (2016) questionnaire comprises 20 standardised questions on the ethical position of persons. It is split into two sections. The first 10 questions target the measurement of the ethical individualism of participants. The second 10 questions target the ethical relativism of participants. Interviewees read the questionnaire and answered the questions by using a standardised Likert scale 1-9 ranging from 'completely disagree' to 'completely agree'. This data was then processed through Excel®. Simplified statistics were performed, mainly through calculating Median, Average and Min-Max analysis.

TABLE 4 QUANTITATIVE DATA ANALYSIS, METHODS

Questionnaire (Forsyth, 2016)	**Inquiry into**	**Collected Data**	**Analysis Method**
Question 1-10	Ethical Individualism	Numbers from Likert Scale 1-9	Excel® Calculation: Median, Average, Min and Max, Bar Graphs, Comparisons
Question 11-20	Ethical Relativism		

The extracted quantitative data was then brought into tables and graphs, narratives and phenomenological description. Comparisons between the two groups of interviewees (surgeons, managers) were performed.

Secondly I arranged and analysed the extensive qualitative data from the semi-structured interviews. I started this process by transcribing each of the ten recorded interviews. The main challenges then lay grounded in correctly 'boiling down' the texts to their core and, at the same time, recognising the implicit complexity of language and meaning (Gebhardt & Mattissek, 2006).

I utilised the well described approach of Flick and von Kardoff (2000) to organise and analyse my qualitative data:

- Start with coding each individual text, through
    - Open and Thematic Coding.
    - In-depth Analysis.
    - Cohort Comparison.
- Synthesise types of opinions.
- Interpret the data.
-

TABLE 5 QUALITATIVE DATA ANALYSIS, METHODS

Semi-Structured Interviews	**Inquiry into**	**Collected Data**	**Analysis Method**
Qu 1	Morals and Business	Transcribed Text	Open Coding, Thematic Coding, In-depth Analysis, Individual and Cohort Comparison
Qu 2	Character and Individuals		
Qu 3	Character and Organisation		
Qu 4	Ethics Internationally		
Qu 5	Hippocratic Oath and Business		
Qu 6	Risks for Patients		
Qu 7	Stakeholders		
Qu 8	Competition		
Qu 9	Organisation		
Qu 10	Corporate Culture		
Qu 11	Decision Making		
Qu 12	Innovation and Harmony		

The initial phase of coding comprised open coding through asking questions such as: What was said? Who is involved? How did the interviewee talk? What did he or she not say? How long did he or she talk? What are his or her motives? What rhetoric strategies were used? This open coding comprised, for example, on the first qualitative question about morals and business in my project, the screening of the

transcribed text and the saved audio-files. Did the interviewee focus on a certain point or words? Manager 1, for example, started with the legal perspective, and changed then to the moral standards of our company to finally state that he cannot see any problems with our idea. From this open coding I then extracted different thematic areas that were addressed and displayed individually through story-telling, citations and in-depth description of experiences made. In the following step of thematic coding I then made sense of the responses of the interviewees and established categories and topics that were mentioned. For example the response: “I do not see any ethical problems with [company M] setting up own clinics, was grouped with similar comments from other interviewees who said the same with different words. This enabled me to count and weigh responses based on the number of their occurrences, but also, for example, how vigorously a comment was made. In the in depth analysis I then ranked the answers of the semi-structured interviews from the most important to the least important ones for each question. I then used the ranked outcomes and opinions for answering the research questions. I then compared different statements and the responses of the two cohorts (surgeons, managers) and sought to synthesise different types of opinions as well as ‘messages in between the lines’ as envisaged in Action Science (Argyris, et al., 1985; Raelin, 1997). I then used the ranked outcomes and opinions for answering the research questions.

Finally I interpreted the data additionally by comparing the data from the quantitative questionnaire with the qualitative data from the semi-structured interviews. Because I utilised Action Science with its strong tie to traditional research in this doctoral research, I also performed the data analysis under this perspective, especially by utilising techniques from grounded analysis for qualitative research (Easterby-Smith, et al., 2012, p. 166). Grounded analysis similarly comprises the

utilisation of formalisation of transcribed texts, is reflective and fosters cataloguing of observed concepts and types of experienced opinions. However, and in retrospect, the data analysis was emergent, iterative and complex. Unlike in traditional research and in grounded theory (Glaser & Strauss, 1967) where pure grounded analysis is applied, my research did not lead to general hypothesis but to actionable knowledge for my organisation.

2.4 RESEARCH ETHICS, RELIABILITY, VALIDITY AND LIMITATIONS

I conducted this research with approval from the ethics board of the University of Liverpool. To receive this approval I submitted the entire outline of this doctoral research, including a full description of the project. This lengthy process was necessary to ensure the quality of the research as well as to protect my participants and organisation from harm. The ethics-board comprehensively examined and approved the processes of participant recruitment, data storage and data security, psychological as well as legal implications and the involved risks. Furthermore all consent forms, information material and sheets for participants were examined and approved.

With this doctoral action research thesis I not only fulfilled the requirements of the ethics board of the University of Liverpool but also my own personal aspirations regarding ethics in research. This ethics research includes my striving for rigour and relevance in research. To address both rigour and relevance in action research it is necessary to reflect on personal and sampling bias as well as to be transparent in

every detail of one's research. Table 7 displays measures to ensure the credibility of research.

TABLE 6 MEASURES TO ENSURE CREDIBILITY

Measures to Ensure Credibility	**Actions Taken to Fulfil Measures**
Account personal bias (Creswell, 2013a)	Reflected and described personal bias (see *3.1.5 The Underlying Belief System)*
Acknowledge sampling bias (Easterby-Smith, et al., 2012)	Described the sample size and its reasoning (see *2.3.1 Data Collection*)
Ensuring proper and strict record keeping of collected data (Flick & von Kardorff, 2000)	Clear description of the data collection, storage and protection process. (see *2.3.1 Data* Collection*)*
Seek comparisons, similarities and differences across participants to address pluralisms (Easterby-Smith, et al., 2008)	Addressed in the literature review (see *Chapter Three: Literature Review and Synthesis*) and in the discussion chapter (see *Chapter Five: Reflection on Action and Evaluation*)
Include verbatim descriptions of participants. Include detailed descriptions of outcomes (Johnson & Duberley, 2000)	Utilised verbatim citations in the findings chapter and provided detailed descriptions (see *Chapter Four: Action Cycles, Results and Sense-Making*)
Demonstrate clarity in terms of the core process: data collection – data analysis – data interpretation (Johnson & Duberley, 2000)	Provided a clear outline of my research (see *2.3 Methods of Data Collection, Sampling and Analysis*)
Respondent validation of the interviews through feedback loops with the participants (Creswell, 2013a)	Feedback and reflective loops with the participants and my CEO (see *Chapter Five: Reflection on Action and Evaluation*)

Table 7 indicates measures for rigour, reliability and validity of qualitative research in the left column and how I have addressed these issues in the right column.

Action research, especially when qualitative only, is frequently criticised by traditional researchers (Donaldson, 2005) because statistical methods to test reliability and

validity of research outcomes are hardly applicable in qualitative action research (Coghlan, 2011; Easterby-Smith, et al., 2008). Therefore literature has provided different measures to prove the *soundness* and *credibility* of research in terms of reliability and validity of qualitative action research. With the utilisation of mixed methods research I was able to additionally contribute to the rigour of my thesis through the weaving in of quantitative outcomes from the questionnaires on ethical positions (see *4.1 Quantitative* Questionnaires). These quantitative outcomes provided a truth-value to a certain extent to which I was able to compare my qualitative findings.

Even though I applied full transparency in my Action Science approach, the outcomes of this thesis might remain limited in a sense. These limitations in this doctoral research are manifold. The first limitation lies in the study design and its emphasis on two groups of stakeholders only. This led to specific actions and knowledge, mainly from the inside-perspective, but lacks at this point the outside-perspective. This opens room for further research in future. The second limitation appears through the limited time frame of this doctoral research and the resulting small sample sizes. From this perspective, action inquiry can only provide a snapshot in time that induces further cycles of action (Coghlan & Brannick, 2014). A third main limitation in this doctoral thesis is present due to statistical limitations as my research design allows only narrow insights into quantitative data and bears the immanent risk of subjectivity in synthesizing and analysing my qualitative data. This risk can be minimised through application of scientific rigour in the individual processes (Shrivastava, 1987; Olejniczak, 2015). The discussion chapter (see *4.3 Discussion, Meaning and Sense-Making* as well as *Chapter Six: Conclusion and Suggestions for Further Research*) refer to perspectives on how these limitations can be overcome and reduced through further cycles of actions and new research.

CHAPTER THREE

LITERATURE REVIEW AND SYNTHESIS

In any actionable inquiry of organisations it is of utmost importance to be aware of one's own assumptions, biases and world views (Easterby-Smith, et al., 2012). It was therefore essential to include a sufficiently detailed synthesis of the respective literature of managerial research and how this has led to my personal belief system in the first section of this chapter. This literature chapter contains three sections.

The first section comprises a contemporary review and synthesis of managerial and organisational research and the working out of my underlying belief systems. I find it essential to reflect on managerial research in depth, as triggering, managing and leading change is a core part of any actionable inquiry. Writing this section was essential for me in order to better reflect on my personal belief system as the researcher, to better understand our corporate culture and finally to adapt the eventually chosen approach that suited my personal and my company's belief system. It allowed me to address my research questions as outlined in *1.2.2 Formulation of Workplace Problem and Research Question*.

I then bridge to the pertinent ethics and values section for my research in the second section, which reflects the first core interest of my thesis.

Finally in section three, I lead over to the innovation and strategy literature relevant for my action research project of inquiring how ethics shape radical innovation in a downstream vertical integration project in the hearing implant industry. I synthesised these topics of actionable management research, ethics, values, innovation and strategy towards a comprehensive academic framework under which I addressed my workplace issue through action research (see *1.2.2 Formulation of*

Workplace Problem and Research Question). Establishing and writing this literature review again comprised cycles and spirals of action, learning in loops and reflection.

FIGURE 7 ACTION CYCLES FOR LITERATURE REVIEW

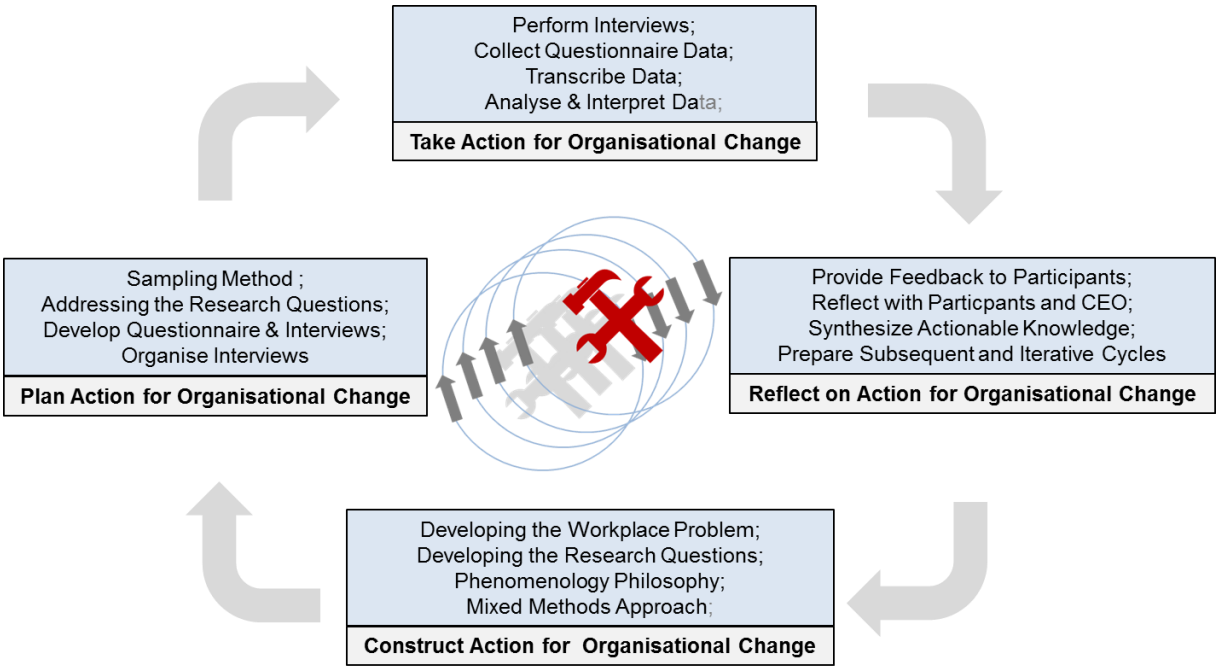


Figure 7 stylises the central meaning of the literature synthesis in this work and how it emerged through iterative changes throughout my writing.

The content of my literature review changed and adapted throughout this thesis. With each single step of action and reflection additional literature appeared on the horizon, while other literature became insignificant over time. My main difficulty was to find the adequate balance between necessary openness and pinpoint accuracy for my topic. From this perspective any action inquiry is demanding for a writer as the overall workplace issue is ever changing. As described earlier: an additional main issue of my research was the lack of availability of academic literature and practical writings or experience in a similar environment. The literature does not provide specific insights into a medical devices corporation applying a radical vertical downstream

strategy towards patients. Only limited information is available from Fresenius Corporation, which, coming from selling dialysis equipment, have started their own clinics for blood purification in renal diseases (Korine, 2000; MarketLine, 2008). A second scientifically unrewarding programme has been established by Medtronic. They very recently have begun to offer catheter-lab diagnostics and therapy for heart diseases, but in a profoundly lower in-depth integration, by mainly taking over logistics for existing hospitals (Telgheder, 2015). I could not find existing literature touching on the matter of interaction between radical innovation and ethics in an environment like mine.

Literature about the shaping nature of ethics on radical innovation exists, but is however not directly suitable for my specific case, as it usually addresses the ethical issues of a healthcare provider servicing patients – for example with new technologies (Bessant & Maher, 2009; Harlos, et al., 2012). The literature fails to address my workplace issue. For this reason I organised my review and synthesis into three main well described blocks of literature. It starts with a succinct review and synthesis of the management literature that backs up the bridgeable gap of practical relevance and scientific rigour in my venture. In the second part of the literature review I enquire into the literature of ethics, values, morals and character from several perspectives. In the third part of the literature review I synthesise the respective writings from innovation, change, leadership and the organisation dynamics in a setting like mine. Through analogisms I seek to approach relevant writings and synthesise the underlying existing knowledge that applies. Analogism, as reasoning through and by analogy developed from the ancient Greeks, is a well-accepted and heavily utilised concept in scientific research (Leatherdale, 1974), as it allows deducing new knowledge in so far unexamined environments. To me it was of

great help to organise this literature review and synthesis in classical way, as it brought order into the complexity of my actionable inquiry.

3.1 MANAGEMENT RESEARCH AND THE UNDERLYING BELIEF SYSTEM

Management- and organisational research developed in the middle of the 20th century (Lewin, 1947; Porter, 1980). Epistemology and ontology in management- and organisational research have been subject to discussions since its emergence in the scientific community (Easterby-Smith, et al., 2012). Since Kuhn (1962) introduced the idea that research paradigms are not fixed but might indeed shift over the course of time, the discourse has become more complex. Reading Kuhn was important to me as he smoothed the way towards actionable inquiry where not only outcomes are not predictable any more but also the research shifts over time of action (Brydon-Miller, et al., 2003). Such organisational research challenges the traditional idea of objective and distant inquiry (Zikmund, et al., 2013) due to its implementation of own assumptions of researchers, which in turn might influence the research itself (Johnson & Duberley, 2000).

To fulfil academic requirements and practical needs management research must be both rigorous and relevant (Shrivastava, 1987). Additionally the applied nature of management research induces a discussion of whether there is a scholar-practitioner gap present (Aram & Salipante Jr, 2003; Bourner, et al., 2000) and whether this gap is bridgeable (Easterby-Smith, et al., 2008) or not (Kieser & Leiner, 2009). Addressing both rigour and relevance might lead to paradoxes which induce, alongside Kuhn's changing paradigms (1962), the necessity to probably perform

research under various epistemological paradigms (Tranfield & Starkey, 1998). This view is of importance for my own venture, as I support the view that there is a rigour relevance gap present in action research (Frese, et al., 2012). However unlike Kieser and Leiner (2009) I found this gap bridgeable – supported by literature (Olejniczak, 2015) and from the practitioner's view in this venture. Being able to bridge both the rigour and relevance, of scholar- and practitioner research was one main insight I found throughout my journey of writing this DBA thesis.

3.1.1 STRUCTURE OF EPISTEMOLOGY AND ONTOLOGY

Epistemology and ontology can be well understood in my German mother tongue where it is part of the *Wissenschaftslehre* (Husserl, 2013), where epistemology addresses the *theory and nature of knowledge*, and it's coming about. Ontology comprises this nature's being – how it is – and structures its realities and possibilities. According to the *Wissenschaftslehre* such knowledge can be subjectively or objectively true. Johnson and Duberley (2000, p. 180), structure different approaches alongside the subjective-objective dichotomy: Positivism and Modernism are both epistemologically and ontologically objective. Both are focusing on results (Chia, 1995). Conventionalism can be both epistemologically subjective as well as objective and ontologically objective (Melenovsky, 2016). Pragmatism in organisational research allows being epistemologically subjective and ontologically objective, while post-modernism is subjective in both epistemology and ontology (Radaelli, et al., 2014) . Burrell and Morgan (1980, p. 608; 1979) structured the approaches under the research paradigm view:

- Functionalists approach their research under an objective and neutral perspective with the assumption of a single reality (Bryman & Bell, 2015).
- Interpretivists are subjective and interpretive with the possibility of multiple realities.
- Radical structuralists or Marxian structuralism (Hassard, 1991) deal with the issue of overcoming imprinted social and physical structures in humans.

There is no consensus in the field which approach to organisational and management research is right or wrong. Several schools of thinking coexist and compete in parallel. Huff (2000, p. 291) therefore introduced different research modes in organisational inquiry. Mode 1 represents traditional, positivistic academic research. Mode 2 stands for practitioners' inquiries in search for relevance. *"Mode 2 rose out of unmet needs and opportunities. Mode 1 is too slow, too inward looking; it gives priority to pedigrees"* (2000, p. 291). Later he added Mode 3 (Huff & Huff, 2001) superior to Mode 1 *and 2 to "accommodate fault finders as well as facilitators"* (Huff, 2000, p. 292). This Mode 3 is somehow best describing my personality as action researcher in this venture. It allows both positioning as a rather distant action researcher as suggested in Argyris' concept of Action Science (Argyris, et al., 1985) and as outlined in chapter two of this thesis (see *2.2 Applied Action Approach and Strategy*) as well as being an immersed facilitator of change. It enables me to view the nature of my action research ontologically relative and not absolute, while maintaining epistemologically constructivist. Constructivism refers to the objectively measured nature but acknowledges this nature is a mental, social construct (Creswell, 2013a). It opposes objectivism in a way, even though it refers to it.

3.1.2 POSITIVISM, MODERNISM AND CONVENTIONALISM

Positivism, modernism and to a predominant extent also conventionalism have their roots in the era of enlightenment. Immanuel Kant postulated the necessity that science must 'dare to know'. David Hume (Hume, 1777), an influential philosopher from that age, demands that true knowledge must be objectively traceable in experience (experiments) and evolves from abstract, again objective, reasoning. Despite severe criticism from different angles (Kuhn, 1962) and throughout the recent decades about the applicability and validity of positivism in organisational research (Halfpenny, 1982) there is still a huge portion of research published under this approach (Idowu, 2017) or under its kindred philosophy of modernism, especially in Anglo-Saxon journals (Donaldson, 2005).

Modernism also believes in testable objective truths that can be generalised, yet it rejects the omnipresent absolute certainty of thinking in the enlightenment era. Modernist research is tendentially quantitative in nature (Shah & Corley, 2006) and still the dominant school of thinking in organisational and management research (McCusker & Gunaydin, 2015). Positivism and Modernism are referred to in traditional or classical research in literature (Easterby-Smith, et al., 2012; Creswell, 2013a; Coghlan & Brannick, 2014; Kuhn, 1962). The absolute claim of objectivity was challenged by conventionalist thinkers and the ground breaking work of Kuhn (1962). In his book *Structure of scientific revolutions* he established the term *paradigm* as *"universally recognized scientific achievements that, for a time, provide model problems and solutions for a community of practitioners"* (p. 10). The key phrase in this citation for me is 'for a time', as it indicates that paradigms and therefore the research environment might change over time or vary in different situations. This is key in my environment of actionable inquiry, as iterative action loops (Coghlan &

Brannick, 2014) might lead to unforeseen outcomes and subsequently different situations. Even what is considered true or false is subject to change and environment.

My example of examining ethical positions underlines that there is no absolute truth experienced (see *Chapter Four: Action Cycles, Results and Sense Making).* Everything seems, to a certain extent, be relative. While Kuhn has brought the human aspect into managerial and organisation research, the discourse whether research paradigms are contradictory (Jackson & Carter, 1991) or not (Willmott, 1993) remains. It has, however, recently been shown that the idea of shifting paradigms is enormously popular in organisational research (Shepherd & Challenger, 2013) and that *"the notion of incommensurable paradigms has legitimized diversity in the field"* (p. 239). This thesis is written in that spirit.

3.1.3 CRITICAL THEORY, POSTMODERNISM AND POST-POSTMODERNISM

Classical research not only came under pressure from the organisational side but also from other social sciences where it has been, due to its tendency for puzzle-solving-only, marked as insufficient (Popper, 1970). The then emerging *Frankfurter Schule* (Frankfurt school of thinking) (Horkheimer, 1988) established the concept of *critical theory* by addressing both the strengths and weaknesses of the ideas of enlightenment.

It is firstly founded on the objective thinking of enlightenment but secondly at the same time questions it profoundly (Habermas & Ben-Habib, 1981; Scambler, 2013). The *Frankfurter Schule* already acknowledges the distorting influence of relations onto objectivity by recognising that "*all thought is fundamentally mediated by*

power relations" (Johnson & Duberley, 2000, p. 132). Critical theory involves self-reflexivity and politics as vital characteristics (Fournier & Grey, 2000). Critical theory has been positively as well as negatively criticised as a Western-world-only and Marxist school of thought (Lu, 2013). *Postmodernism* in research then has established itself as a true crosscurrent to classical research, mainly as a result of what can be found in literature as 'modernist disillusion' (Alvesson & Deetz, 2006) and the insufficiency of traditional research to address relevant sociological questions for the society and organisations (Habermas & Ben-Habib, 1981).

Postmodernist thinking has risen in parallel to the changes in the Western world from a production society to a service-oriented society (Lu, 2013). Increasing utilisation of qualitative research approaches has developed (Keegan, 2009). Focuses of organisational research were then not only the outcomes or results but turned into *"attention to phenomena in the world"* (Kilduff & Mehra, 1997, p. 460). Cooper and Burrell (1988) indicated the reactiveness of organisations onto their inner forces and politics and the therefore hardly predictability in organisational behaviours (Stowell, 2014). Postmodernism elevated the discourse, as an academic value itself, to key importance in management research. With this the impact and significance of the articulated word and the linguistics increased its influence (Van Maanen, 1995). A major distinction to traditional research is that postmodern thinking allows hyper realities with several, more than one realities (Kilduff & Mehra, 1997) and thus lacks a clear definition. This "*unleashed relativism*" (Johnson & Duberley, 2000, p. 91; Alvesson, 1995) with its prioritisation onto the interestingness of the research process (and not onto the outcomes) (Bartunek, et al., 2006) has been an ongoing criticism on postmodernism.

Post-Postmodernism as a cultural logic (Darby, 2013) is characterised by the discourse between traditional and non-traditional research and is regularly pictured

as a combat (Lu, 2013) or as a *"war…fighting for journal space and scientific advancement"* (Kilduff & Mehra, 1997, p. 475). In essence it is mainly a battle between objectivists against subjectivists, despite both fractions increasingly accepting the general necessity of a *"more reflexive approach towards management research*" (Johnson & Duberley, 2000, p. 177). Action research per se is not classical, as it fails objectivity (Raelin, 2009). It has been accused of being unscientifically postmodernist with a tendency for unbridled relativism (Moser & S., 1978). Post-modernism however enables phenomenology (Kilduff & Mehra, 1997) for my research as well as qualitative research (Cunliffe, 2011) as the most suitable view for my personality as well as for my action research. Post-postmodernism utilises critical realism and pragmatism as an escape (Morrell, 2008) to address both rigour and relevance (see also *Figure 6 Research Onion, adapted from Saunders et al (2012)*).

This pragmatism enables rigorous research as well as narrative phenomenological approaches alongside the *actor-network-theory* as a combination of different elements and incoherent actors (i.e. stakeholders) (Calás & Smircich, 1999) as utilised in this thesis. It furthermore includes the intriguing possibility of *story-telling* (Gold, et al., 2002) to add, for example, relevance.

3.1.4 BRIDGING THE RIGOUR RELEVANCE GAP WITH ACTIONABLE INQUIRY

With the realisation that paradigms might shift (Kuhn, 1962; Halme, 2016) management and organisational research also evolved and changed throughout the recent decades. Interestingly this development has led to a divide between practitioner- and scholar-driven researches (Anderson, et al., 2001). Traditionally

oriented scholars tend to negate practitioners' writings and books (Guest, 1992) despite their obvious (economical) successes and point to the unbridgeable gap between academic and practice writings (Kieser & Leiner, 2009); also referred to as the scholar-practitioner gap or the rigour-relevance gap. I support recent publications indicating that even though there is a "*conflict between the two concepts of rigour and relevance […] their actual relationship is a symbiotic one"* (Olejniczak, 2015). However, classical academic writings do not find their way to the practitioner's world (Aram & Salipante Jr, 2003; Bourner, et al., 2000; Huczynski, 1993, p. 455) and remain broadly unread outside the universities.

Rather recent approaches striving to bridge the rigour relevance gap have been *actionable inquiries* like my presented Action Science thesis and research. Based on early work of Lewin (1946; 1947) researchers began to address the subjectivity-objectivity problem by establishing a continuum between subjective inside immersed research and objective outside research (Evered & Louis, 1981). This established continuum allows me to overcome the dichotomy of outsider traditional research and insider immersed research by enabling in-between positions (Brannick & Coghlan, 2007). Actionable inquiries are inside and immersed modes (Coghlan, 2011). Depending which kind of actionable inquiry is utilised, it offers different levels of immersion or distance to research. My utilised approach via Action Science (Argyris, et al., 1985) is to be seen rather on the objective side on the Evered and Louis continuum as Action Science is the closest action inquiry mode to classical research (Zuber-Skerrit, et al., 2015).

Any chosen action mode itself is diverse in nature (Cassell & Johnson, 2006) and features Action Learning (AL) (Revans, 1998), double loop learning (Argyris, 1977) and reflexivity as inherent characteristics (Alvesson, et al., 2008). Actionable inquiries comprise participation of all involved (Greenwood, et al., 1993). Action

research, as performed in this venture, requires me to act as a change agent and facilitator of (innovational) change (Caldwell, 2003; Lewin, 1946). The immersion into research requires my profound reflexivity as a researcher (Coghlan, 2001). Weick (2002, p. 893) introduced an appealing concept of 'disciplined reflexivity', which I applied in this research. It entails a healthy, pragmatic utilisation of self-reflectiveness in the research process which is not only for its own sake.

3.1.5 THE UNDERLYING BELIEF SYSTEM

Action research makes it inevitable to reflect onto one's own belief system from both the researcher's angle (Alvesson, et al., 2008; Reynolds, 1998) as well as from the practitioner's perspective (Schön, 1983). One's own assumptions and interests in a venture must be clearly addressed (Easterby-Smith, et al., 2012).

When I reflect on my career I recognise to have been trained in a positivistic and objectivist manner before I started the venture of writing this doctoral thesis four years ago. Objectivism and quantitative research were the common schools of thinking (Donaldson, 2005) in my education as an electrical engineer as well as in my studies of management. This view has changed over the course of my doctoral work. In reflection on the literature utilised in this chapter and on the experiences I collected in this venture I have critically revised my self-perception (Mead, 1934) and subsequently adjusted my research approach, as finally applied in this thesis. As a member of the Senior Management Board of corporation M with the task to set up company-owned clinics and the objective to perform research my personality change as a researcher started with the recognition that I would be immersed in the matter

which I would study (Coghlan & Brannick, 2014). Not only would I be immersed, but even lead the change project I was researching (Raelin, 2011) as the facilitator of an induced change (Pauchant & Mitroff, 1988; Lewin, 1946). Yet despite the necessity of being subjectively immersed into actionable research (Greenwood & Levin, 2007) I prefer to stay as distant as possible (see *2.2.1 The Approach*) as supported by Argyris' et al Action Science approach (1985).

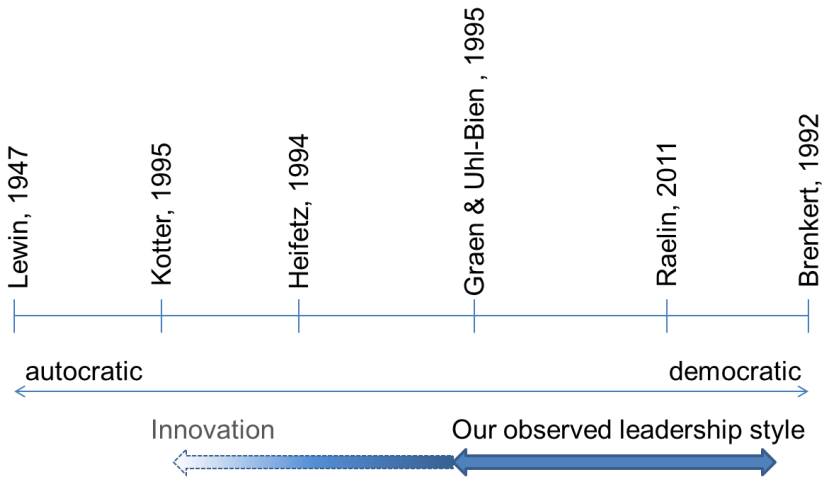
I view my research as ontologically relative (Johnson & Duberley, 2000) as I believe the nature of my inquiry is tendentially relative and not absolute. My approach is epistemologically constructivist (Creswell, 2013a), which means I believe in the objective nature of my research, which is nevertheless mentally constructed. Alongside Kuhn's shifting paradigm dogma (Kuhn, 1962), I even apply the concept of being multi paradigmatic (Buchanan & Bryman, 2007) across time. Finally this thesis is written under the pluralist view (Willmott, 1993; Tranfield & Starkey, 1998, p. 345) with a realist and pragmatic twist (compare *Figure 3 Research Onion, adapted from Saunders et al (2012)*), especially from the ethical point of view (Wingfield, 2013). For me it was important to describe 'the essence' (Creswell, 2013a) of how ethics shape radical innovation for the new setup of company-owned clinics. I made sense (Weick, 1988; 2006) of witnessed experiences (Worthington, 2010) and derived actionable knowledge, which enabled me to set actions for change. This attempt lies at the core of phenomenological research and writing (Moustakas, 1994; Kleiman, 2007) which I utilise in this doctoral thesis. I furthermore developed a preference for first-person-narrative writing in the recent four years (see *2.2 Applied Action Approach and Strategy*), which is applied in this thesis.

As one of the inventors of the project, the leader of the especially-for-this-venture established separate business unit (Christensen & Overdorf, 2000) and as a member of the Senior Management board I have had power, influence and access to

staff and data as well as a sufficient level of autonomy to conduct this doctoral research. The necessary application of power and influence led me to reflect on our organisational dynamics and my respective leadership style throughout this venture. Our organisational belief system turned out to be complex and adaptive (Stacey, 2011). While we believe in strong leadership in an innovational environment (Conger, et al., 2000; Kumar, 2004), we paradoxically seek to prevent any tensions and disharmony, which is in turn inherently present in innovation and change (Bryman, 1984).

From the organisational dynamics perspective this dichotomy caused tensions: for example between different business units and departments. The paradox of seeking harmony and innovational change at the same time induced the necessity of internal politics (Hawes, 2015) and uncovered my personal style of leading change and actionable research. In reflection on our current organisational system, our corporate leading style would be described best as a situative style on a continuum between leaderful (Raelin, 2003) and leader-member style as described by Graen and Uhl-Bien (1995). Innovational projects in our firm are tendentially leader-driven, as described by Kotter (1995)

FIGURE 8 OBSERVED LEADERSHIP STYLE



The observed comprehension of leadership reflects my post-postmodernist worldview through application of realist and pragmatic leadership (Morrell, 2008), which is situative in its core, but still strives to be consistent from the perspective of values as postulated in leaderful leadership from Raelin (2003), while more leadership-oriented in innovational contexts.

In retrospect, reflecting on and evaluating contemporary management research and the overall underlying belief system was crucial for conducting this thesis and addressing the research questions. Why was this so? The initial idea of action research did not fit to the company's culture of positivism. This learning in a first cycle of reflection led to the next loop (Argyris, 1977) of searching for alternatives and modifying the approach. I had to constantly align it to the workplace problem; because, at last, this workplace problem of the problematic lack of knowledge about the influence of ethics on radical innovation had to be solved. In a sense this process occurred through asymptotic approximation of the world views of participants. With this basis I subsequently then structured the next two sections of the literature review.

3.2 ETHICS AND VALUES

Ethics in business and innovation cannot be seen separated in these days (Fassin, 2000). This includes negotiations and discourse between all stakeholders and adaptation to local needs (Demirtas, 2015). Jamnik (2017, p. 93) even extends the relationship of ethics and innovation in so far as "*society expects managers to be*

ethical and that managers should be responsive to the expectations of society and stakeholders if they wish to maintain their legitimacy as agents in society". This binds any manager and facilitator of change and innovation, once she or he does not follow the pure shareholder perspective only (Clouse, et al., 2017). In the following section I dissect and discuss the ethical perspective of this interdependent matter.

My thesis is captioned as 'Ethics in Radical Innovation'. Ethics and values are therefore at the core of my doctoral research. The formulation of my workplace problem and research questions comprises the *shaping influence* of ethics on innovation. It examines the *ethical positions* of specific stakeholders and the *impact* on our corporate organisation. It finally raises the issue of implicit *paradoxes* which I seek to answer with my third sub-question.

To address the ethical side of my workplace problem and the outlined research questions I organised the ethics section of my literature review into five areas of interest. Each section went through iterative cycles of learning and adaptions. I start to reflect on ethics and values in business, whether there are absolute or relative truths available (Bell & Bryman, 2007) and how 'doing good' is perceived in literature (Holt, 2006). I then shed light onto systematics to measure ethical behaviour of research participants (Forsyth, 1980; 2016) and connect it to the Hippocratic Oath (Jotterand, 2005) as a common moral body of rules in my workplace environment.

The Hippocratic Oath, where clinicians swear to do no harm to patients under any circumstances, is a key element in healthcare business (Hagen, 1995) and thus in my workplace. Badaraccio's (1998) idea of transforming individual values into meaningful actions through continuously building character embedded into 'good' organisational values (Allio, 2011) form the groundwork for the second part of this section. It focuses on the role of character of involved persons in my venture. In

addition to virtue ethics, my favourite school of thought, I provide an overview of different schools (Poon & Hoxley, 2010; Hursthouse, 2013) and connect it to the *theory of ethical positions* (Forsyth, 2016; 1988; 1980). Forsyth's theory of ethical position is addressed and utilised in my first sub-research question (see *1.2.3 Formulation of Sub-research Questions*) and further described in the methodology section of this thesis (see *2.2 Applied Action Approach and Strategy*).

The third part of this section puts ethics and values in an international context as present in my corporate environment (Badaracco, 1992; Shafer-Landau, 2013). I enquire into stereotypes (Kumaravadivelu, 2003) and cultural differences (Starr-Glass, 2011) in an actionable setting.

In the fourth part I unfold the connection of ethics and values with the stakeholder approach in management (Goodpaster, 1991; Fassin & Gosselin, 2011) to finally discuss the literature of ethics correlated to sustainability (Elkington, 1997; Glavas & Mish, 2015) in a corporate but patient centred environment (Concannon, et al., 2012). Stakeholder's perspectives and their influence through present or applied ethical lenses into our organisation lie at the core of my research and are addressed by both the utilised questionnaires as well as by the semi-structured interviews (see *2.3 Methods of Data Collection, Sampling and Analysis*).

3.2.1 ETHICS AND VALUES IN BUSINESS

The matter of what is right or wrong is a broadly discussed topic in everyone's life. It is also present in any innovational business thinking (Elenurm & Kooskora, 2002), especially in healthcare (Gilmartin & Freeman, 2002). Can the discussion of ethics

and values in my environment provide an absolute truth? Bell and Bryman (2007) support the view that ethics, morals and values can be perceived as relative or absolute and might be interpreted variously from different individuals (Dench, 2006).

Ancient Aristotle claimed for a ‘good life’ (Holt, 2006, p. 1662) where the ethical values of a person and his actions must be morally sound at any time. Others argue that, for example in the corporate world, managers do not have moral obligations (Friedman & Friedman, 1990) as they only would need to obey respective laws and shareholder interests (Shafritz, et al., 2015). Idealists on the other hand claim absoluteness in morals, values and ethics (McDonald, 2010). Forsyth (1980) has shown that individuals differ profoundly in their level of individualism in moral questions and how relative or absolute they judge and apply ethics and values in their daily life. He later adapted this systematics towards the health industry (Forsyth, et al., 1988) and established a heavily cited taxonomy of ethical ideologies (Forsyth, 1980) with a respective questionnaire to measure individualism and relativism of individual ethics (Forsyth, 2016; 1980). I utilise this exact Ethics Position Questionnaire (EPQ), which has been widely and validly used in research, for the quantitative methodological part of this doctoral research. The EPQ enables me as a researcher to enquire into the ethical belief system of relevant stakeholders (see *2.2.2 Justification for the Chosen Approach*). This allows the quantitative measurement of the ethical standpoints of my research participants and to inquire into their moral thought. Forsyth started his work nearly forty years ago and has collected data from more than 30,000 subjects (Forsyth, 2016). He provides a classification system with basically two dimensions – relativism and individualism. From this basis a fourfold graph is derived and the ethical position of any person can be displayed. Forsyth’s EPQ has been utilised heavily in the literature throughout the recent decade. The EPQ was found valid in a critical examination by Davis et.al, (2001) and that their

"results indicate that EPQ factors do [even] account for differences in ethical judgments of business practices (p. 43)." From the business perspective Demirtas (2015) recently closed the gap between ethical ideology and ethical leadership by utilising data from the EPQ. Even though they criticised limitations of the EPQ with persons from multicultural backgrounds – they tend to be more relativistic than the global average – Hrenyk et.al. (2016) underlined the broad usability of Forsyth's work to measure the moral thought of individuals.

Badaraccio (1992) revealed the tensions and polar opposites of ethical values and business success for managers. Interestingly for my case he relativised this dichotomy implying that there are no "*issues of right versus wrong; they involve conflicts of right versus right, of responsibility versus responsibility"* (p. 65). McKay and Marshall (2001) add that in environments of actionable inquiry the matter of researcher bias is adding to the complexity of acting right or wrong. In the healthcare industry the Hippocratic Oath, with its inherit necessity of 'doing no harm at no circumstances' additionally is omnipresent (Jotterand, 2005); and of eminent importance as it has been generally shown that moral standards are regularly observed as inversely proportional to the possibilities of earning money (Marnburg, 2001). Crane and Matten (2016) suggest differentiating between the ethics of individual stakeholders like shareholders, employees, or the civil society. While this seems a pragmatic possibility, it does not relieve the responsible individuals, for example, from advertising healthcare services in a holistic, but acceptable way (Schenker, et al., 2014). This acceptance includes a thin line of what is legally allowed in healthcare (Galician, 2013) versus what is locally accepted by the society and finally what is required from the business perspective to drive growth (Kumar, 2004).

Literature is consistent that among different industries relativism and absolutism are equally distributed (Crane & Matten, 2016) across the globe. My personal tendency for realistic pragmatism (see *3.1.5 The Underlying Belief System*), in that ethics, value and innovational business need to compromise, is supported (Wingfield, 2013), but remains a battleground in the literature (Bagnoli, 2013). While ethics from a personal standpoint versus organisational needs can cause tensions (McDonald, 2010), the presence of innovation adds additional complexity (Torres, 2015), if for example social norms are questioned. This refers to our main research question whether it is ethically sound, if a manufacturer of medical devices all of a sudden starts to treat patients it-self and how ethics shape innovation. Gilmartin and Freeman (2002) have addressed this question partially more than a decade ago. They conclude that one needs to adapt his or her expectations of what business in healthcare is – move away from 'cowboy capitalism' towards a perspective of stakeholder capitalism. Patients and physicians as involved stakeholders with their expressed needs change the business view in the healthcare industry (Concannon, et al., 2012) towards the practically doable and a mutually accepted ethical frame.

3.2.2 THE ROLE OF CHARACTER

The academic discourse of whether absolute ethical truths in doing business exist or whether moral and ethics in business are even necessary is ongoing (Bell & Bryman, 2007) and not conclusively answered. Badaraccio (1992) added an intriguing concept to this discussion by suggesting that it might be a discourse of 'right versus right' and not right versus wrong. As a constructive pragmatist (see *2.1.5 The Underlying Belief*

System) I support this view, even in sensitive areas such as healthcare, where the business is about the wellbeing of humans. Poon and Hoxley (2010), supported by very recent literature (Hursthouse, 2013), provide three categories of ethics and morals to classify the different schools of thinking, where action researchers and facilitators of change need to position themselves (Israel, 2015).

- *Consequentialism* describes a school of moral thinking where the outcome or result of an action justifies for the means of these actions. Consequentialism, closely related or synonymously described as *utilitarianism*, is seen as a 'responsible approach' in research that is connected to innovation (Deblonde, 2015), but questioned and contradicted by
- *Deontology,* which is based on the philosophy of Immanuel Kant, where strict rules are in force that are universal for each situation (Longhofer & Floersch, 2014). Deontology believes in an absoluteness of wrong or right in the organisational and managerial environment (Macdonald & Beck-Dudley, 1994). Deontology is a paradox to the third school of thinking in morals and ethics,
- *Virtue Ethics.* Virtue Ethics, based on the ideas of the ancient Greek philosopher Aristotle, moves away from the influence of outcomes, consequences or rules, but puts the individual person or researcher into the focus of interest (Hursthouse, 1999). Virtue Ethics strives for a 'good life' (Poon & Hoxley, 2010) in every situation and decision and thus fosters criticality and ethical praxis throughout actionable change processes (Nielsen, 2016). Aristotelian search for good life does not distinguish between private life and business (Small, 2011).

The role and influence of a manager's character has been increasingly important in literature of organisational ethics, starting with Badaraccio's emphasis on the morally sound manager, as a foundation of '*good decisions'* (Badaracco, 1998). Managers therefore would need to build their character, for example, by asking insightful and powerful questions (Torbert, 1999; Marquardt, 2007). While deontology requires absolute truths for managers in every situation, consequentialism is rather situational whereas virtue ethics allows applying relativism to organisational situations where managers are required to decide in a morally sound way (McDonald, 2010).

Forsyth's (1980) taxonomy of ethical behaviours allows classifying individuals alongside these attributes by utilising a heavily cited questionnaire (Forsyth, 2016).

TABLE 7 ETHICAL BEHAVIOUR

	Low Relativism	**High Relativism**
High Idealism	**Absolutists** Principled Idealists who believe people should act in ways that are consistent with moral rules to yield the best outcomes	**Situationalists** Idealistic contextualists who favour securing the best possible consequences for all concerned even if doing so will violate rules of right or wrong
Low Idealism	**Exceptionalists** Principled pragmatists who endorse moral rules as guides for action, but admit that following rules might not generate the best consequences for all concerned	**Subjectivists** Pragmatic relativists who base their ethical choices on personal considerations, such as individual values or emotions

Table 1 displays the four possible ethical positions of individuals, adapted from Forsyth (1980).

I used this questionnaire to classify stakeholders in my research (see *2.3 Methods of Data Collection, Sampling and Analysis*), to examine not only what values specific stakeholders in my venture have but also who they are (what their character and virtues are) in order to extract hidden beliefs (Argyris, et al., 1985) (see also *2.2 Applied Action Approach and Strategy*).

In Hursthouse's (2013) classification system I found the idea of virtue ethics appealing and applicable in my environment. While deontology is too strict for a pragmatic realist like me, utilitarian consequentialism would miss the necessity to reflect on the wellbeing of individual humans in my venture (Hursthouse, 1999). Utilitarians in my workplace issue face tensions in order to maximise outcomes, potentially on the back of patients (Poon & Hoxley, 2010), while deontologists, in an extreme scenario, might end up fulfilling the Hippocratic Oath under any circumstances by ensuring too few revenues to let the venture financially survive (Pennington & Pennington, 1994). The urge for 'a good life' under any circumstance on the other hand prompts me as researcher and facilitating manager to criticality for every decision (Nielsen, 2016). Virtue ethics, with normative elements (Hursthouse, 2013), such as the Hippocratic Oath (Jotterand, 2005) in my venture, foster a pragmatic perspective and emphasize the individual character of the researcher (Badaracco, 1992).

I furthermore localised empirical evidence for the positive correlation of the individual manager's character with their organisation's ethics and values (Huhtala, et al., 2013). From a linguistic perspective Posner (2010) supports the positive correlation of individual character and organisational ethics. The key message in literature, even supported by neo-liberals (Gick, 2003), is: the better the ethics, character and morals of an individual manager, the better and higher are the ethics of an organisation. This correlation is of importance in my setting as it supports a

leitmotif for both individual as well as organisational sound behaviour which are implemented in our venture's strategy, based on corporate values (see *3.3 Strategy, Organisation and Innovation*). Individuals and organisations like mine thus can feature certain character attributes as well as virtues (Hursthouse, 2013) and, for example, define limitations and borders. In this sense Schenker et al (2014) provided guidance for what is allowed to convince patients based on virtue ethics and pragmatism. He refers back to Badaraccio (1998) and the necessity of a manager with a 'good' character, but points to the dilemma of being a manufacturer (of medical devices) on one hand and a handler of dependent patients on the other hand where the Hippocratic Oath comes into place (Jotterand, 2005).

Pragmatism and virtue ethics are thus regularly observed in clinical practice (Jotterand, 2005). Practice with patients seems to require compromises with a more relativistic view, as suggested by McDonald (2010). Aristotelian virtue ethics with its mindset of searching for 'practical wisdom' (Eikeland, 2007) is compromising on one hand but enables both academic rigour and practical relevance (Shrivastava, 1987). Through its cooperative nature involving individuals and stake-holding organisations it has the potential to bridge the gap between ethics and business (Trevino & Weaver, 1994) present in my workplace issue of setting up company-owned clinics.

3.2.3 ETHICS AND VALUES IN AN INTERNATIONAL CONTEXT

Since my workplace issue of setting up company-owned clinics for hearing implants is of international nature, it is essential to enquire into the matters of ethics and values in an international, multinational and even multicultural context (Badaracco,

1992). I support Shafer-Landau's view (2013) that any corporate aspect has an ethical dimension. Supporting literature on corporate ethics includes ideology and religion, as well as on morality, character and codes of conduct (Robertson & Athanassiou, 2009). Yet, as described in the previous section, the comprehension of what is ethically good, right or wrong differs profoundly when examined in an international context (Korthals, 2008; Shafer-Landau, 2013). It differs between nations and between cultures (Svensson & Wood, 2008; Robertson & Athanassiou, 2009). While this seems legitimate, there is an inherent danger of applying stereotypes which can be overcome by applying actionable research (Kumaravadivelu, 2003) with the objective to gain deeper cultural insights and true cultural differences (Starr-Glass, 2011).

Whether such cultural differences would even allow a common ground for globally accepted ethics is questioned in the literature (McDonald, 2010). Svensson and Wood (2008), in a relativist approach, argue for the necessity to adjust ethics locally to gain 'room for manoeuvre', at least within basic common boundaries (Korthals, 2008). Warren (2011) and Shafer-Landau (2013) localised such basic common ethical ground across different nations and cultures. In my example the Hippocratic Oath could serve as such a common set of ethics as it is sworn across cultures (Jotterand, 2005).

From a business perspective, in line with the publications of Schenker et al (2014), I have experienced that governmental regulations on running medical practices or clinics and hospitals are in a sense comparable worldwide. I again trace this back to the commonly binding Hippocratic Oath, which I consider a mutual code of conduct (Svensson & Wood, 2008, p. 263) and normative in its pragmatic view as virtue ethics (Hursthouse, 1999) as outlined in the previous chapter. The competition between Hippocratic Oath and the need to economically survive (Hagen, 1995)

induces tensions to both managers and doctors as well as to organisations like mine. Silverman (2000) suggests overcoming these tensions by establishing and implementing strong organisational values, as we have established for our venture (MED-EL, 2016) with emphasis on the Hippocratic Oath to protect patients' comparably weak position.

My personal experience in setting up the first clinics has proven Silverman (2000) right. An example from my experience might illustrate additional experiences and divergences made in different cultural settings: When we established our pilot clinic in the United Arab Emirates (UAE), we experienced rather ethical absolutism when it came to the protection of patients and their data, as described by Rizk (2008). Authorities insisted deontologically on patients' safety (Inoubli, 2013) with hardly any pragmatism as suggested in pragmatic virtue ethics (Pennington & Pennington, 1994). The Hippocratic Oath had to be fulfilled without exemptions. On the other hand, economical success is an imperative for foreign investors in the UAE. One is not allowed to deliver a negative balance sheet (Emirates Free Trade, 2017). At the same time and paradoxically tensions with economical perspectives were bureaucratically ignored. Interestingly, but in line with Abuznaid (2009), I have experienced the majority of employees in the UAE to have a rather utilitarian mindset.

In our Canadian setup the experience was different. While the Hippocratic Oath is the same, authorities have acted rather consequentialist and pragmatic, as expected in the tendentially utilitarian Anglo-Saxon environment (Inoubli, 2013). In contrast to this, the experience with Italian authorities in our fourth clinic was again different, as they have put the Hippocratic Oath in midst of the approval and licensing procedure. As indicated in the section where I have established the workplace problem (see *1.2 The Workplace Issue*) they doubted our corporation's fundamental ability to serve patients at all. How could a firm with a business background treat

patients without economic interests? This experience is supporting the rather deontological cultural stereotype (Starr-Glass, 2011) in Central Europe, when it comes to interpreting the Hippocratic Oath contemporarily (Jotterand, 2005). This circumstantial narrative exemplarily describes how even a similar group of stakeholders might differ in their perspectives on a global perspective (Parmar, et al., 2010), even if they build on an exact common value such as the Hippocratic Oath. This finding implies both tensions to organisations, as addressed in the second sub-research question of this thesis as well as might bear paradoxes, as examined under the third sub-research question (see *1.2.3 Formulation of Sub-research Questions*).

3.2.4 ETHICS, VALUES AND STAKEHOLDER THINKING

The reach of the financial crisis in 2008 gave rise to a revivification of the stakeholder attempt (Fassin & Gosselin, 2011) and a deep questioning of the shareholder primacy in several industries (Millon, 2013). The questioning of the shareholder primacy is organically and deeply embedded in our corporate culture (see *1.1.1 The Workplace Environment*) and reflects my personal belief system. I support the view that corporations run under the stakeholder paradigm rather asking "*what is the purpose of the firm"* (Freeman, et al., 2004, p. 364) than focusing only on the return for its shareholders. It also connects back to the pragmatic virtue ethics approach, as outlined in the next to last section (see *3.2.2 The Role of Character*). Those 'who have a stake' in corporations comprise all involved individuals and organisations (Donaldson & Preston, 1995) and integrates them in creating corporate and society value. This stakeholder view increases the pressure on managers and their mind-set

towards comprehensiveness, including ethics and social values (Parmar, et al., 2010), as it might induce trade-offs for shareholders in a neo-liberal, purist Friedman view (Friedman & Friedman, 1990).

Stakeholders include all ‘players’ (Goodpaster, 1991) who have influence, which in turn can be weighed (Parmar, et al., 2010) and have different levels of influence to managers and organisations (Santana, 2012). Some writers perceive the orientation towards stakeholders that includes social responsibility as an approach to overcome selfish and greedy behaviour of both managers and organisations (Carroll, 1991). Others very recently even indicate the economically promising nature of comprehensive involvement of all players, especially in innovational healthcare projects (Jonas & Roth, 2017). Hadders and Miedema (2003) demand managers, who deliver both public and social interest as well as profits for the shareholders. Yet the stakeholder approach is at the same time criticised for being a root cause for managerial misbehaviour, especially through its strong emphasis on stakeholder orientation (Cennamo, et al., 2009). Stakeholder orientation implies the necessity of networking, known as the innocent sister of lobbying, which can lead to severe negative issues in healthcare (Scott & D., 1985) as well.

Interestingly, and supportive of my organisational environment, the literature ranks family-owned corporations ethically higher compared to publicly-listed ventures (Mitchell, et al., 2011). The key to these observations seems to be the long-term and value orientation that family-owned firms have rather (Colli, et al., 2013) than their stock listed peers. Goodpaster’s (1991) suggestion on ranking the influence and weight of stakeholders is addressed in this thesis (see *2.3 Methods of Data Collection, Sampling and Analysis*). While my venture features several different stakeholders (see *1.2.1 Synthesis of the Workplace Problem*), this doctoral research concentrates on two important groups of shareholders only to make it pragmatically practicable.

3.2.5 ETHICS, VALUES AND SUSTAINABILITY

Sustainability in a corporate and encompassing context is described as counting on "*people, plan and profit"* by Elkington (1998) while German researchers (Caspers-Merk, 1998) have connoted it rather with 'healthy' long-term survival of ventures. This idea of healthy long-term survival is a core value in our corporate belief system (MED-EL, 2016). It is closely connected to the idea of a Triple Bottom Line (TBL) (Elkington, 1997). TBL recognises (1) the economical, (2) the social and (3) the environmental dimension of businesses (Glavas & Mish, 2015) and is well established in healthcare (Henriques & Richardson, 2013). Dhiman (2008) emphasises the interweaving of both the necessity of measuring TBL in firms as well as utilising its strategising effects (Wilson, 2015). Even though it is *"hard to find a major company which does not have some sort of sustainability initiative underway"* (Dhiman, 2008, p. 52), it is difficult to find solid definitions of TBL in the literature. The imperative of sustainable management is not only omnipresent in healthcare (Jackson & Barber, 2015) but also across all industries (Hadders & Miedema, 2003). It is, for example, under combat whether TBL is to be seen as a subgroup of Corporate Social Responsibility (CSR) or vice versa (Freeman & Hasnaoui, 2011), while other writers note that TBL is nothing but reaming previously established approaches of assessments into economic, social and environmental matters (Vanclay, 2004). Some authors even try to broaden CSR and TBL towards 'global corporate citizenship' (Schwab, 2008).

I personally tend to agree pragmatically with Dhiman (2008, p. 54) that ignoring the comprehensiveness of TBL is at least self-defeating for any corporation, even if, especially the social and environmental impacts are regularly hardly measurable (Norman & MacDonald, 2004). In this thesis I furthermore utilise the

ideas of TBL as a subset of CSR as suggested by Freeman and Hasnaoui (2011) and *"a way of thinking about corporate social responsibility, not a method of accounting"* (Vanclay, 2004, p. 267). Elkington (1998) early recognised this weakness of the TBL concept and suggests thus to apply falsification. He has suggested improving accounting of these aspects by establishing what is *un*social or *ir*responsible. However the ambiguity through the unclear definition of what TBL is enables strategic opportunities for corporations (Wexler, 2009).

In our venture of establishing a new business unit that comprises the set-up of company-owned clinics, we act alongside the stakeholder view (Donaldson & Preston, 1995) adapted to the healthcare industry and a patient-centred approach (Concannon, et al., 2012). This implies a clear commitment to act responsibly to and with all stakeholders in ethical, economic and social terms (Carroll, 1991). The environmental aspects in healthcare are present but especially in small clinics of subordinate importance (Hewlett, et al., 2014). Our corporation, for example, emphasizes mainly the economical and the social dimension, whereas the environmental dimension is rather underrepresented in daily corporate life.

3.2.6 ETHICS, CORPORATE SOCIAL RESPONSIBILITY AND STRATEGY

Before I provide a contemporary overview of the relevant literature on strategy, organisational dynamics and innovation, this section is intended to provide bridging knowledge from ethics to strategy. Innovational strategies are connoted with organisational change (see *3.3.2 Innovation and Change*). Our induced change (Christensen & Overdorf, 2000) is based on TBL (Elkington, 1997) as a subset of

CSR (Freeman & Hasnaoui, 2011) in an environment of pragmatically applied virtue ethics (Hursthouse, 2013) in healthcare and in a competitive setting (see *Figure 2 Rich Picture of Involved Stakeholders*).

Not only the described venture of setting up company-owned clinics but also the whole superordinate firm is exposed to strong competition. In line with our belief system the strategising process of setting up our own clinics had let us focus on innovational leadership (Porter, 1980) with the intrinsic aim for a morally sound managerial system (Carroll, 1991). We have intended to follow the view of Porter & Kramer (2006; 2011) that strategy and CSR need to be connected as it does not make sense to *"pit business against society"* (p. 79). While this idea finds support in literature (Pava, 2008), recent literature still indicates doubts about the simultaneous utilisation of strategy and ethical obligations (McManus, 2011). Nevertheless we combine strategy and CSR in our venture as, based on our practical experiences, we believe that this combination still enables profitability (Desrochers, 2010). This combined approach, however, induces the necessity of reputation building (Steyn & Niemann, 2010) as well as responsible public relations activities as part of strategising (Galbreath, 2009). The emphasis on both strategy and humanity-driven CSR (Pearce, 2008), on the other hand, stimulates reflection on one's own ethical views (Poon & Hoxley, 2010) and how to position oneself (Israel, 2015). Reflection lies at the core of action research, as philosophically and methodologically utilised in this thesis as well as emphasizes the necessary strong role of character as described in this chapter (see *3.2.2 The Role of Character*).

The genesis of this chapter however can be characterised as bringing order into the mess. I started to read and write down respective literature that I found useful to address my workplace problem. I initially approached the matter of character, but learned immediately that, for example, values play a major role in my environment. I

subsequently went through manifold iterative cycles of learning, adaption and reflection. Finally the process of meaning and sense-making, as described in *4.3 Discussion, Meaning and Sense-Making*, forced me to revisit this section and complete it further. As any actionable inquiry can only be a snapshot in time, this literature review will adapt and evolve with any further cycle of action that might follow in future. Since bringing about change to my organisation was an inherent part of my thesis, a second vital area of interest in my research concerned the matter of organisation, strategy and innovation.

3.3 STRATEGY, ORGANISATION AND INNOVATION

As described in the previous section, ethics and innovation must be seen in combination. This section is dedicated to the innovational part of this relationship.

Based on the early and popular writings of Drucker (1998) who described 'innovation' as the *"means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth (p.3)"*, Lopez recently described four different forms of organisational innovation in a practical way (Lopez, 2015). He distinguishes between

- incremental innovations in existing markets and with existing technologies
- architectural markets where existing technology is utilised in new markets
- disruptive innovation where existing markets are targeted with new technologies
- radical innovation where new markets are entered with new technologies

Accordingly I described my utilised form of innovation as radical, based on the new service approach in new markets, but located in the service innovation area rather than in the product innovation field (Bettencourt & Brown, 2013). In a pragmatic sense this is in line with the writings of Christensen's (2011) view on different forms of innovation, who however provided a rather bur border especially between radical and disruptive innovation. Doran (2012) confirmed this blurred line by finding complementarity among these two forms of innovation. These are the basic premises for my further considerations in this chapter.

Examining the ethics in radical innovation led me to shed light on the literature in ethics in the previous section. I developed this section in parallel to cycles of learning, modification, application and reflection. This following section synthesises the relevant writings and knowledge in innovational strategising. I do this by establishing the academic background and referring it to the influence of innovation, channelled through the main research question and emphasized in the second research question, where I seek for the organisational impacts of my action research.

The described areas of interest emerged throughout this research as a reaction to the research questions as well as direct results from reflections, for example, during the development of the quantitative questionnaire. I start with the connection of strategy and innovation based on present belief systems in our corporation (see *3.1.5 The Underlying Belief System*) and their connection to our workplace environment under a stakeholder perspective. Through my workplace lens I reflect on the matter of competitive strategy (Porter, 1980; Porter & Teisberg, 2006) in innovation and healthcare (Zuiderek-Jerak, 2009). Different approaches to innovation, from incremental to radical (Christensen & Overdorf, 2000) and from product- to service innovation (Miles, 2008), are discussed. My innovation venture is of a radical nature. It has been shown that such innovations cause change in

organisations (King & Anderson, 1995) and tend to produce paradox implications for managers (Ingram, et al., 2016). In the leadership and innovation section I address leadership's importance in innovations (Drucker, 1994; Kotter, 1995; Sosik, et al., 2009) and connect to actionable styles of leadership in innovation (Hersey, et al., 2008). Decision making in innovational projects and organisations is then examined under our corporation's present paradox of seeking harmony versus striving for being an innovation leader until I finally address the connected literature for complex systems (Stacey, 2011) under innovation.

3.3.1 STRATEGY AND INNOVATION

The concept of competitive advantages (Porter, 1980) is broadly accepted in the management literature (Davcik & Sharma, 2016) and provides the foundation for my strategic views. Even though Porter is regularly criticised for deducing general theories from mainly case studies (Dawes & Sharp, 1996, p. 36), recent critical studies found further support for Porter's theories (Awino, 2015). Porter and Teisberg (2006) extended the initial theory towards the healthcare industry to indicate that even in usually higher regulated markets like the healthcare sector (Zuiderek-Jerak, 2009) competitiveness is key for success (Teisberg, et al., 1994; Zweifel, 2017). This is of relevance for my project, as we have set up the new company-owned clinics under the perspective of competition, even in publicly-funded environments. The simplifying nature of Porter's competitive advantages through emphasising segmentation, differentiation and cost-leadership delivered through a resource-oriented and valid value chain (Hunt & Arnett, 2004) was useful for me to organise all

kinds of messy processes (Calton & Payne, 2003) that, for example, occurred throughout establishing our pilot clinic in the Middle East. In order to produce measurable outcomes and innovations

Porter & Teisberg (2006), however, suggested focusing on value-based outcomes (not cost- or price-leadership) for the healthcare environment. It has been shown that corporations like mine utilising a stakeholder perspective with respective competitive advantages bear the potential to (1) drive such value based innovation and (2) master the resulting organisational implications (Harrison, et al., 2010). Innovation in all industries can be radical, disruptive or incremental (Ritala & Hurmelinna-Laukkanen, 2013). A risk in my radical venture is that radical and disruptive innovations have an extreme likelihood to fail (Groenewegen & de Langen, 2012) for similar reasons as why change attempts fail (Kotter, 1995): lack of vision, lack of support or empowerment as well as wrong timing. Christensen's (2000; 2011) writings on disruptive and radical change and innovation point to the paradox dilemmas that strategies can even be 'right' although they are not successful. In an innovative environment, firms strive to drive the market (Kumar, 2004) to gain market share in profound contrast to being driven (Kumar, et al., 2000). Chang et al (2012) have shown that successful innovation in established corporations correlate with the organisational ability to be open and integrative.

However, contemporary literature on innovation strategies is still dominated severely through a perspective of product innovation (Slater, et al., 2014). The specifics of service innovation as represented in my action research are comparably underrepresented, even though analogies might be effective. Miles (1993) was one of the first to address this gap and to connect it to the healthcare industry, however mainly from a nursing perspective (Miles, 2008). He set the groundwork for service innovation as a phenomenon with multifold dimensions where all relevant

stakeholders are involved (den Hertog, et al., 2010) and organisational learning is featured (Senge, 1990), which connects back to my inquiry.

Our practical experience has furthermore shown that service innovation must be even more solution-driven than product innovations. *"We argue that meaningful service innovation by a product-dominant company must begin with the recognition that services are solutions to customer needs"* (Bettencourt & Brown, 2013, p. 277). Service innovation in this school of thinking has a feedback loop to my utilised approach of Porter's competitive advantages (Carlborg, et al., 2014) even though a recent systematic review criticised an overemphasis on individual actors in innovation (Eloranta & Turunen, 2015). Miles, on the other hand, suits Christensen's (2011) and Kumar's (2004) perspective of innovation being an induced change to organisations. Additionally, organisational innovation, such as my workplace issue of setting up clinics as a medical device manufacturer, entails innovation of business models (Matzler, et al., 2013; 2015). Service innovation as well as business model innovations need 'overarching strategy and structure' (Kindström & Kowalkowski, 2014), as suggested by Porter (1979). Therefore corporations like ours need to develop both strategies for product innovation and service innovation at the same time (Gremyr, et al., 2014).

Literature lacks immediately comparable set-ups like mine. However from an analogous perspective, Lehaux (2012) has uncovered organisational straits for medical devices firms when they strived to transform towards service innovation. Medical devices firms tend to be resistant towards transformational change to services and stick to product innovation (Nijssen, et al., 2006) despite having respective strategies in place. This comprehensively mirrors our practical experiences of the venture so far.

3.3.2 INNOVATION AND CHANGE

Innovation leads to change in organisations (King & Anderson, 1995). Innovation even deliberately induces change (Christensen, 2011). Both innovation and change can hit an organisation continuously or as a single episode (Weick & Quinn, 1999). My radical innovation project for this doctoral thesis thus far is to be seen episodically, as it had a clear starting point from where change has happened (Michel, 2014), while continuous change features *"no beginning or end point in [a] change process"* (Orlikowski, 1996, p. 66). Change processes in organisations generally follow a sequence of 'unfreeze, change and refreeze' (Lewin, 1951), while *"episodic change follows the sequence unfreeze-transition-refreeze, whereas continuous change follows the sequence freeze-rebalance-unfreeze"* (Weick & Quinn, 1999, p. 361). Innovational projects causing change need to make and give sense (Gioia & Chittipeddi, 1991; Green & Cluley, 2014).

Despite the sense-making aspiration, innovation, especially if radical or disruptive like mine, can be a trigger for organisational crisis (Gummesson, 2014). Kotter's work on *why transformation fails* (1995) provides answers to properly reacting to upcoming crises even before they might appear, for example, through empowerment of involved stakeholders. Being prepared helps to overcome crises induced by innovational change (Pauchant & Mitroff, 1988; Carmeli & Schaubroeck, 2008, p. 180) because change disturbs the organisational striving for stability (Tsoukas & Chia, 2002). Organisational inertia is the consequence (Hannan & Freeman, 1984) even though paradoxically innovation is purported to be essential for survival (Bailom, et al., 2013). While this necessity for change is occasionally criticised (Sorge & Witteloostuijn, 2004), Tsoukas and Chia (2002) offer a bridge to the dichotomy: *"We need to see organizations both as quasi-stable structures ….*

and *as sites of human action in which, through the ongoing agency of organizational members, organization emerges"* (p. 580). Thus organisations like mine can be viewed as 'complex adaptive systems' (Dooley, 1997; Stacey, 2011) as further detailed later on in *3.3.5 Innovation and Organisational* Dynamics. Inertia in innovational change can also occur through different perspectives and diverse levels of readiness of involved stakeholders (Otten, 2016).

Tensions could for example occur when problems are perceived as technical by the facilitator of change while they are experienced as emotional by the operational stakeholders like employees (Lüscher & Lewis, 2008). Innovational change can thus yield paradoxes (Ingram, et al., 2016) which again could lead to open or silent resistance (Morrison & Milliken, 2000) and stakeholders not 'buying-in' to the innovational change (Fleming & Spicer, 2003). These paradoxes have been described as "*tension[s] between clarity and uncertainty"* (Vince & Broussine, 1996, p. 7).

Corporate change literature from the perspective of business ethics on the other hand has been intensively developed in the recent years. Busse (2014) found that traditional shareholder thinking in an utilitarian way needs counterbalance in the form of corporate morality. He demands ethically pragmatic leaders, less dogmatic on business needs than postulated earlier by Kotter (1995). It seems that healthy pragmatism, or 'disciplined reflexivity' as Weick (2002) put it, is the current way of thinking in change management. This is supported by Will & Pies (2018) who warned about both extremes: neither moral alone as the main driver of change nor strict shareholder-thinking might result in optimal outcomes of change. They plead for pragmatic sense-giving and sense-making approaches that comprise narratives and discourses. Very recent writings support these findings also from the leadership perspective. Leading change through reflected sense-giving and discourse rather

leads to ethical business values than leading through classical shareholder-thinking approaches (Nygaard, et.al., 2017). Adaption of business ethics furthermore happens automatically in different cultural environments (Okpara, 2014). In my multinational research environment this is of great importance.

Handling inertia and crisis requires openness from the involved parties (Pauchant & Mitroff, 1988). They should be confronted directly (Mitroff, et al., 1987). In radical innovation projects Sandberg and Aarikka (2014) recommend addressing any resistance as soon as it occurs. In their literature review of 103 articles they uncovered, for example, restricted mind-sets as a root cause of resistance to innovational change. Innovational inertia can be overcome through proper knowledge creation and 'cross functional organisational learning' (Elenurm & Kooskora, 2002), which closes the circle to the necessity of organisational learning for corporate success as such (Senge, 1990) and to actionable learning (Revans, 1998) as suggested in the concept of double loop learning (Argyris, 1977). *"Organizational learning [as] a process of detecting and correcting error"* (Argyris, 1977, p. 116) thus could provide the ground for organisational renewal and adaption (Crossan, et al., 1999) in my organisation.

3.3.3 INNOVATION AND LEADERSHIP

We have seen that innovational projects like this venture have strong ties to individuals who facilitate and lead the change (see *3.3.1 Strategy and Innovation*). Leadership in innovation is coupled to the respective corporate culture (Bolton, et al., 2013). Our corporate culture requires personalities that are technology driven, innovative, creative, honest and respectful team players (MED-EL, 2016).

Consistency in the corporation's values is positively connoted in the leadership environment (Drucker, 1994; Kotter, 1995; Sosik, et al., 2009) despite different theories of leadership that can be found in the literature (Nahavandi, 2016).

In the actionable inquiry literature, leadership is regularly connected to Raelin's approach of leaderfulness (Raelin, 2003) in which a leader needs to act in a 'concurrent, collective, collaborative, and compassionate' way. On the other hand, leadership in innovational settings like mine is repeatedly connected to charismatic leaders with rather leader-follower characteristics (Greenwood, 1993; Heifetz, 1994; Lewin, 1947; McKnight, 2013). Charismatic leaders in innovational change are seen as driving forces for involved stakeholders to exert extra efforts (Meindl, 1990). Lewin's (1947) view of leadership in actionable change and innovation has been rather autocratic. Kotter's (1995) implicit present approach to leadership is tendentially autocratic and plannable, while Heifetz (1994) is already focusing on values, but still in a leader-follower style. This idea is shared with Graen and Uhl-Bien (1995) who clearly focus on relationships. Raelin's (2011) leaderful approach is already rather democratic, whereas Brenkert (1992) even further extends the democratic view of leadership towards excessive freedom for participants.

I established this figure of a continuum to reflect my own, as well as onto my organisation's applied leadership style (see *3.1.5 The Underlying Belief System*). Additionally, Tannenbaum and Schmidt (1973) indicated that different leadership styles can be observed at the same time in between or even in mixed variants (Conger, et al., 2000).

FIGURE 9 LEADERSHIP STYLES ON A CONTINUUM BETWEEN AUTOCRACY AND DEMOCRACY

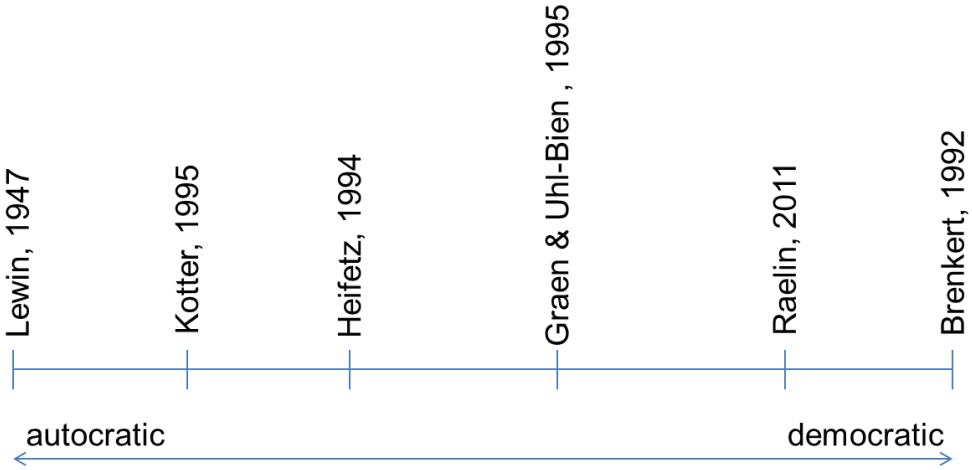


Figure 9 illustrates the continuum of leadership styles between the opposite ends of autocracy and democracy. It furthermore indicates under which leadership-perspectives the authors have written their work.

Leadership in medical environments, such as hospitals or clinics, in the literature is regularly described as conservatively following a leader-follower characteristic (Pihlainen, et al., 2016) with autocratic tendencies (Amitay, et al., 2005) and a general resistance against organisational change in this field (Barnett, et al., 2011). One argument heretofore, which I heavily support, is the responsibility to prevent malpractice based on the Hippocratic Oath (Jotterand, 2005). Hersey et al (2008) developed a concept that overcomes the necessity of different styles of leadership by suggesting the application of tailor-made influential behaviour, depending on the readiness of the involved (The Center of Situational Leadership, 2017). While practically useful, I experienced that situational leadership has a downside in innovative organisations. It is counteractive and counterintuitive to employees' desire for accountability of their leaders (Kerns, 2015). The literature indicates that extreme organisational situations, such as crises or radical innovation, should be led strictly

and rather autocratic (or in other words: *direct*) by higher charges, such as directors and senior managers (McConnell & Drennan, 2006).

FIGURE 10 SITUATIONAL LEADERSHIP

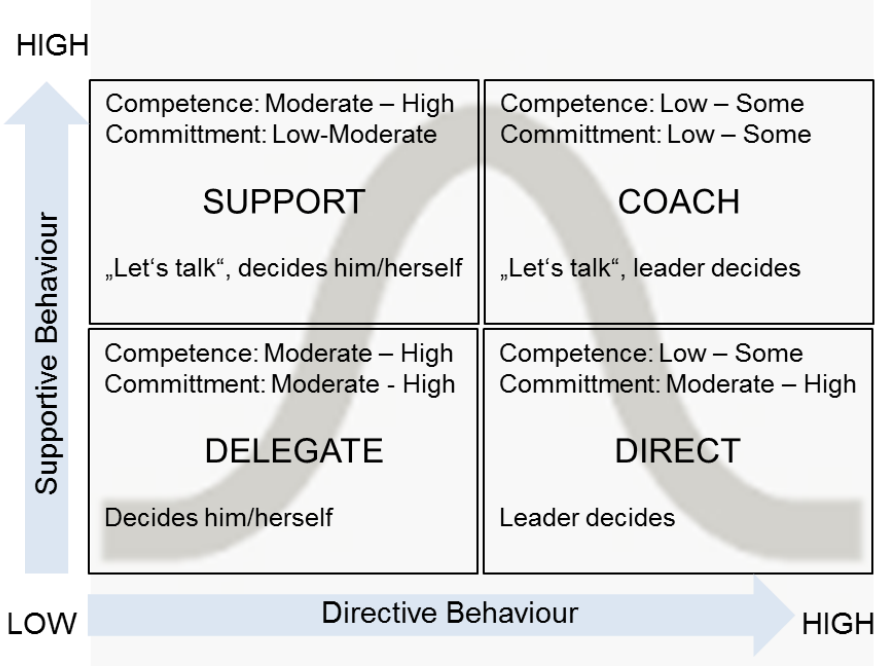


Figure 10 features the situational leadership model, adapted from Hersey et al (2008).

Critical problems demand tendentially command-style leadership (Grint, 2005, p. 1472) while incremental innovational change is related to the well-established model of Weick's enactment of managers (1988) and participatory sense-making leadership (Dixon, et al., 2016). From practical experience this view can be confirmed, especially when ideas not only were developed, but also needed to be asserted, enforced and put across. The same applies in crises. Nevertheless, leaders need to address both innovational change and organisational stability at the same time (Lüscher & Lewis, 2008, p. 231). Palmer and Dunford (2008, p. 20) assumes that *"the nature of managing and the nature of change outcomes are associated with different images of*

managing change: directing, navigating, caretaking, coaching, interpreting and nurturing".

3.3.4 INNOVATION AND DECISION MAKING

Decisions in our venture of setting up company-owned clinics are made in an environment of organisational learning (Senge, 1990) and complex responsiveness (Stacey, 2011). Our corporate culture specifically is dominated through paradoxically striving for innovation and organisational harmony simultaneously (see *1.1.1 The Workplace Environment*). Drucker's (1998) mechanical view of effective decision making in organisations is supported in our corporate culture. In such environments, decision making characteristics like sense-giving and sense-making are supported in literature (Weick, 1988; Orton, 2000; Gioia & Chittipeddi, 1991) for both individual- as well as group decision making. The more critical or radical a situation, the more directive (see *3.3.3 Innovation and Leadership*) and the less group-influenced decisions become (Kumar, 2004; Drucker, 1998; Leifer, et al., 2001).

Innovational projects, especially when risky or radical, require decisive leaders (Oliveira, et al., 2015; Stringer, 2000). It is, on the other hand, paradoxical that literature occasionally and simultaneously supports group decisions (West & Anderson, 1996) in innovational change projects, which in turn would align, for example, with harmony-striving tendencies like in our corporation. Additionally, individuals and groups suffer from decision bias (Bazerman & Moore, 2008). For example, intrinsic overconfidence (Taylor & Brown, 1988) or inherent cognitive filters (Schwenk, 1984; Anderson, 2003) are common issues in organisations (Santonen & Hytönen, 2015) under innovational change. Such decision bias can be addressed

through individualised (Weick, 2002; Reynolds, 1998) or group-related (Ekvall, 1996; West & Anderson, 1996) self-reflection. As groups are described as limiting influences in radical innovation (Christensen, 2011) self-reflection in our case must be individualised. Decisions furthermore might induce uncertainties, especially in complex adaptive or responsive systems (Walker & Valentine, 2014). These hidden or open uncertainties might bear unintended organisational consequences (Drummond, 2001), which have the potential to incrementally relegate organisations away from their initial objective (Hardin, 1968; Platt, 1973). The literature suggests installing a corrective force in organisations under innovational change, if decisions are mainly driven by individuals (Leifer, et al., 2001) to enable and support an active cultural climate of strong discourse (Joni & Beyer, 2009) and 'good conflicts' (De Clercq, et al., 2009). Discourse, in contrast to controversy, can potentially meet the requirements of a harmony-seeking corporate culture (Abbas, 2013) and support innovational change, as it combats the harmony-seeking tendencies of filtering out unpleasant situations (Taylor & Brown, 1988), as typically occurs in our organisation.

3.3.5 INNOVATION AND ORGANISATIONAL DYNAMICS

Innovation has a strong influence on organisational dynamics. Corporate organisations under innovational forces, such as mine is, can be viewed as complex systems in action (Carlisle & McMillan, 2006; Comfort, et al., 2001; Dooley, 1997) even if they are utilising different schools of thoughts (Stacey, 2011). This is an issue present in my case through our organisational striving for harmony and our belief in radical innovation at the same time.

Throughout the recent years I have furthermore found my own organisation applying ‘strategic choice, systems thinking, organisational learning and complexity thinking’ (Koell, 2015) simultaneously. Static simplified views and perspectives collide with dynamic, messy processes. This means in our practice: on one hand our venture of setting up new clinics as well as our whole organisation is built on ‘shoulders of giants’ (Patton, 2013) in a *strategic choice* sense, which includes Porters’ competitive strategy (Porter, 1980; 2006; Teisberg, et al., 1994), Kotter’s approach for organisational change (Kotter, 1995) and Christensen’s findings of radical and disruptive change (Christensen, 2011; 2000), driven by Kumar’s ideas of driving markets (Kumar, 2004; 2000). Additionally Lewin’s (Lewin, 1946; 1947) early action research ideas and Miles’ (Miles, 1993; 2008) turn on service innovation complement or corporate strategic choice fundament.

Our organisational superstructure is surprisingly static, given our intended corporate culture of driving innovation and markets on the other hand. Plannability is a major strength of strategic choice and at the same time severely criticised in complex and innovational environments (Stacey, 2011) of self-regulating organisations as intended in my venture of setting up company-owned clinics. For harmony seeking organisations strategic choice is practical (Hawes, 2015) and supports equilibrium and balance. It provides security and dependability for involved stakeholders and employees. However, strategic choice fails to address complex environments (Muller, et al., 2015) and induces paradoxes, such as staying in equilibrium but, at the same time, needing to change (Törnberg, 2014).

Innovational change with a radical note, as present in this venture, entails risks and uncertainties for external stakeholders and internal members of the organisation. It is hardly plannable as would be necessary in strategic choice environments. Innovation in complex systems, as is present in healthcare (Sturmberg, et al., 2013)

and in my action research, produces innovational change (Stringer, 2000) and induces resistance (Yen, et al., 2012). At the same time it fosters *organisational learning* (Jimenéz-Jimenéz, et al., 2014) as intended in our corporate goals (MED-EL, 2016). Organisational learning is utilising feedback loops and remains open for unexpected results (Senge, 1990).

To overcome its limitations on growth from the research point of view (Nolas, 2006) and in practice (Stacey, 2011, p. 116), the literature suggests applying constructive enactment (Weick, 1988; 2006). This is necessary to address corporate politics (Morton, et al., 2004) in innovation projects which might additionally add tensions to the tilting equilibrium in radical change, especially in organisations with strong cultures (Bryman, 1984) such as ours. As a downside such strong cultures with strong leaders in innovation (see *3.3.3 Innovation and Leadership*) bear the risk that *"blind confidence in others' goodwill may overpower the effective exploitation of alternative ideas and viewpoints and thus hamper innovation"* (Ayers et al, 1997 in De Clercq et al, 2009 (p. 294)). Strong leadership in innovational environments has therefore paradox attributes.

Innovation in a complex environment is featuring Complex Responsive Processes (CRP) (Stacey, 2011). It was exactly such a process of iterative exchanges of ideas to develop the project between my CEO and me that led to the set-up of our company-owned clinics (see *1.1.1 The Workplace Environment*). CRP founds on Hegel's criticism to Kant's absolutist split between subject and object (Borges, 1998) and deconstructs the Kantian 'independent individual'. Complex responsive processes additionally imply a cognitivist view and thus support inside- and outside-thinking (Evered & Louis, 1981; Brannick & Coghlan, 2007). These relativistic and constructivist perspectives in innovation strategies close the circle back to my virtue ethics world view in the previous section. CRP allows managers as

participants in innovational leadership and research while still being distant, decisive and leaderful (Stacey, 2011). It features a pragmatic view that paradoxes can be present in organisations but can be overcome. Pragmatism emphasizes practicability (Groot & Homan, 2012) in innovational change.

In reflection and in order to address my research and the existing knowledge base sufficiently, this section had to be broad. It, again, emerged through repetitive cycles of learning and adaption throughout the overall process of performing this research. This also comprised feedback loops that occurred in later stages of action, which are described in the following chapter.

CHAPTER FOUR

ACTION CYCLES, RESULTS AND SENSE-MAKING

This chapter comprises three sections. Firstly I present the results of taking action through quantitative questionnaires, which I handed out to five surgeons and five senior managers. These questionnaires contain the scores and answers of my research participants. Secondly I reveal the action, outcomes and comments of my research partners from the semi-structured interviews. In the third section I provide an extensive discussion of the action taken and of the results of my inquiry and make sense of the findings. I discuss the outcomes, bring them into relation and reflect on the research participant's opinions and statements. I seek to present my findings *"in an orderly sequence"* (San Francisco Edit, Scientific, Medical and General

Proofreading and Editing, 2017) alongside the chosen research questions and the outlined methodology as described in *Chapter 2 Research Design and Methodology*.

The first two sections of this chapter mainly are dedicated to only display the pure, uninterpreted findings of my research. In *4.1 Quantitative Questionnaires* I present the outcomes of the Ethics Position questionnaire (Forsyth, 2016). In *4.2 Semi-Structured Interviews* I exhibit the rich data from the transcriptions. I leave these two sections uninterpreted to make it easier for future research and researchers to derive additional meaning from my work. In *4.3 Discussion, Meaning and Sense-Making Interviews* I finally interpret the findings alongside my research questions and make sense of the outcomes in order to generate action.

After the data collection phase I reviewed the data and discussed their relevance with corporate M's statistician in order to extract only the meaningful results. The quantitative data are organised in the same sub-sequence as suggested by the Forsyth questionnaire (Forsyth, 2016) and included some basic statistical calculations. The quantitative data mainly address the first sub-research question (RQ 1) - What *are the experienced ethical positions of main stakeholders?* - and are a major contributor to the main research question (RQ): *"How do ethics shape radical innovation in a downstream vertical integration project in the hearing implant industry?"* The qualitative data address the second sub-research question (RQ 2) - *"How has our corporation adapted and evolved as a result of this action research?"* as well as provide data to RQ1 and RQ3 as discussed in the methods section (see *2.3.2 Addressing the Research Questions*).

The combined data inform the main research question, which addresses my workplace issue of being *unreflected about how ethical influences shape the radical innovation nature of our project of setting up company-owned clinics, which is*

potentially inducing an increased susceptibility for project failure. This chapter comprises main action cycles and spirals of my thesis.

Figure 11 Take Action Cycles and Spirals

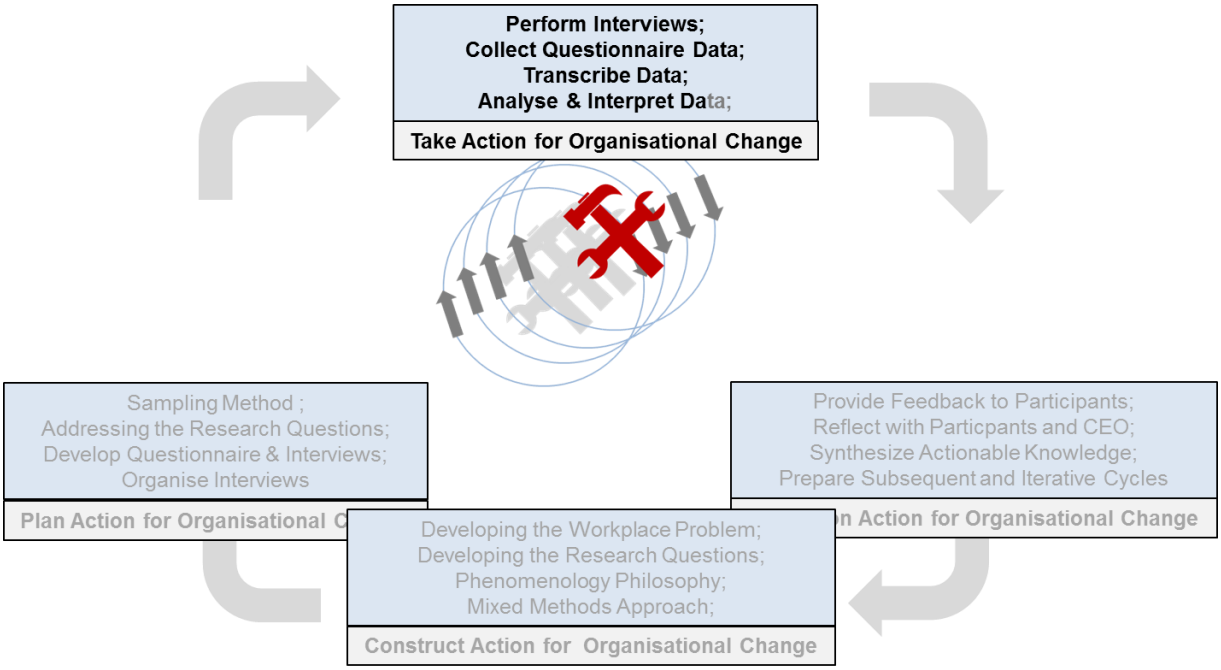


Figure 11 stylises the cycles of action through collecting data with questionnaires and semi-structured interviews. I collected these data with my research participants and fed outcomes back.

The questionnaires and the semi-structured interviews were held in the English language. I recorded these meetings and then transcribed them literally in order to provide an unadulterated stock of basic data (Bucher, et al., 1956).

The first cohort of participants consisted of five senior- and well renowned surgeons from five different countries. The second cohort of participants was recruited from corporation M's Senior Management and consisted of five senior managers from five different countries. Participants came from Canada, United

States of America, Spain, Scotland, England, Russia, Germany, South Africa, Australia, and Belgium. All participants were introduced to the project, to ethical approval of the study and their opportunity to exit the study at any time. The overall group consisted of three female and seven male participants.

All data are presented in tables, figures and in a descriptive manner which reflects my own preferences as well as my chosen phenomenological approach (Creswell, 2013a). All collected data consistently result from ten research participants as outlined in *Chapter 2 Research Design and Methodology*. Subsequently to presenting the results, I discuss the findings extensively and connect them to my narrative of setting up company-owned clinics. This reflection is taken under the perspective to justify the actions taken. For this I emphasise making and giving sense to the results (Gioia & Chittipeddi, 1991) in the discussion section of this chapter.

Making and giving sense to research findings is essential in any action research modality. I therefore apply sense-making and sense-giving for each sub research question individually. Furthermore I decided to correlate the findings for the individual sub-research questions with the literature and screened them for their practicability. After reflection on each sub-research question individually I merge the reflected findings to conclude the answer for the main research question (Argyris, et al., 1985; Tripp, 2005) on the shaping nature of ethics on innovation. This structure follows the guidance of the San Francisco Edit (2017), where the main research question is answered through derivation from the findings of the sub-research questions.

In the next two sections I provide the outcomes of the quantitative questionnaire cycle and the semi-structured interviews cycle. In the third and most important step I then interpret and make sense of these results in *4.3 Discussion, Meaning and Sense-Making.*

4.1 QUANTITATIVE QUESTIONNAIRES

The survey cycle was of importance for the development of a solid understanding of the ethical positions of the two stakeholder groups. With Table 8 I collected the scores of their answers on idealism. As an immersed facilitator of change I additionally added my own results in order to provide a reflection of my thinking. Finally it was important for me to include the Forsyth's worldwide collected data to put my findings in context. Are my stakeholder groups different to the worldwide mean? What is my position?

Together with the results on relativism of my stakeholder groups (see *Table 9*) I developed one of the most important graphs of this thesis (see *Figure 12 Ethical Positions of Research Members*) that sets the participants' positions into relation. All participants completed the Forsyth questionnaire on ethical positions (Forsyth, 2016; 1980) and answered all 20 questions through a 1-9 Likert scale. The provided Likert scale is standardised (Forsyth, 2016) and ranged from 'completely disagree' to 'completely agree'. Questions 1-10 address the idealism and questions 11-20 address the relativism of a respondent. All participants of both cohorts answered each question even though they found it challenging, especially due to the involved linguistic subtleties. The collected quantitative data allow reflection on demographic results to compare the two cohorts as well as to calculate simplistic key indicators, such as mean scores and standard deviations of the groups. Inferential statistics can be performed in a limited way. This includes t-testing, due to the small sample sizes (Easterby-Smith, et al., 2012) and calculation of the degrees of freedom (df).

Table 8 summarizes the scores of the five interviewed senior managers and the five surgeons for their position on idealism. As in Forsyth's study (1980), the

individual scores of questions 1-10 were added to result in a final score that reflects the position of a participant in terms of his or her ethical position in terms of idealism. This leads to the situation that scores on ethical positions in idealism must fall within a window of minimum 10 and maximum 90. Final scores of surgeons on idealism turned out to be rather homogeneous, ranging from 45 to 68. However, this homogeneity occurred despite the fact that individual questions were answered in a more varied way. For example, Question 3 was answered by the surgeons between a range of 2 (‘largely disagree’) and 8 (‘largely agree’). These differences in individual questions were balanced out within the 10 questions. The mean value of all surgeons’ idealism is 52.80 with a standard deviation of 9.203. For the interviewed managers the picture looks similar. Final scores of managers’ idealism range from 44 to 74, which is more scattered but still rather homogeneous. The mean value for managers’ idealism is 57.80 and thus slightly higher than the surgeons’ mean value. The standard deviation for managers’ idealism is 12.617. Total mean of the scores of all five surgeons and five managers is 55.30.

I added my personal score for idealism, based on the scores of the Forsyth questionnaire, with a value of 58, in order to additionally reflect my own belief system and bias as necessary in action research (Coghlan & Brannick, 2014). Forsyth (2016) has collected values on individualism during the recent decades and postulates a mean on individualism of 65.52 based on n=30,230 participants from 29 countries. In my study, both surgeons’ and managers’ mean values have turned out to be below this worldwide average.

TABLE 8 QUESTIONNAIRE RESULTS ON IDEALISM

#	Question	Surgeons						Managers						$\overline{M}$ total	Author
		S1	S2	S3	S4	S5	$\overline{S}$	M1	M2	M3	M4	M5	$\overline{M}$		
1	People should make certain that their actions never intentionally harm another even to a small degree.	8	6	6	7	9	7,2	8	9	8	8	3	7,2	7,2	7
2	Risks to another should never be tolerated, irrespective of how small the risks might be.	7	2	6	3	2	4	4	6	6	8	4	5,6	4,8	7
3	The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.	8	1	3	3	1	3,2	4	3	3	7	4	4,2	3,7	5
4	One should never psychologically or physically harm another person.	7	7	5	7	9	7	4	7	6	9	8	6,8	6,9	7
5	One should not perform an action which might in any way threaten the dignity and welfare of another individual.	9	7	3	7	6	6,4	7	8	8	9	8	8	7,2	8
6	If an action could harm an innocent other, then it should not be done.	9	6	3	7	8	6,6	5	8	7	9	4	6,6	6,6	7
7	Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral.	2	1	1	3	1	1,6	3	2	2	1	1	1,8	1,7	2
8	The dignity and welfare of the people should be the most important concern in any society.	9	8	8	7	8	8	4	8	8	7	4	6,2	7,1	7
9	It is never necessary to sacrifice the welfare of others.	2	2	2	2	3	2,2	5	7	2	8	3	5	3,6	2
10	Moral behaviours are actions that closely match ideals of the most "perfect" action.	7	6	8	7	5	6,6	3	8	8	8	5	6,4	6,5	6
	IDEALISM	68	46	45	53	52	**52,8**	47	66	58	74	44	**57,8**	**55,3**	**58**

Table 8 displays the scores on idealism of five interviewed surgeons, five managers and their mean values. My own scores are displayed in addition.

With Table 9 I provide the second layer to understand the ethical position of my chosen stakeholders. Individual relativism constitutes, together with individual idealism, the ethical position of a person (Forsyth, 1980). Table 9 summarizes the scores of the five interviewed surgeons and of the five senior managers in terms of their relativism. Again the participants' scores on the individual questions 11-20 were added to the result in a final value that represents the participants' ethical position in terms of relativism. As before, the minimum value, therefore, could theoretically be 10 and the maximum could be 90. Surgeons' relativism scores range from 27 to 74 and are more inhomogeneous than their scores on individualism and more inhomogeneous than the relativism of managers, whose values range rather homogeneous from 38 to 55.

The mean value of surgeons' relativism was 42.80 with a standard deviation of 18.926. The managers' mean score was 46.40 with a standard deviation of 8.989. My personal score on relativism was 48. Forsyth (2016) postulates a mean on relativism of 52.74 based on N=30,230 participants from 29 countries. In my study both surgeons' and managers' mean values are close, but lower than his worldwide average.

TABLE 9 QUESTIONNAIRE RESULTS ON RELATIVISM

#	Question	Surgeons						Managers						$\overline{M}$ total	Author
		S1	S2	S3	S4	S5	$\overline{S}$	M1	M2	M3	M4	M5	$\overline{M}$		
11	There are no ethical principles that are so important that they should be a part of any code of ethics.	2	2	2	2	5	2,6	4	2	2	1	9	3,6	2,2	2
12	What is ethical varies from one situation and society to another.	4	1	9	2	9	5	6	3	3	6	7	5	4,3	6
13	Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person.	1	1	9	7	2	4	6	3	2	1	6	3,6	3,2	4
14	Different types of morality cannot be compared as to "rightness".	2	4	9	5	5	5	8	3	3	5	5	4,8	4,4	4
15	Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual.	2	2	6	3	1	2,8	6	2	7	1	3	3,8	3	6
16	Moral standards are simply personal rules that indicate how a person should behave, and are not be applied in making judgments of others.	2	2	8	4	8	4,8	6	6	6	9	2	5,8	5,1	2
17	Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes.	2	2	5	2	1	2,4	5	3	4	8	3	4,6	3,2	6
18	Rigidly codifying an ethical position that prevents certain types of actions could stand in the way of better human relations and adjustment.	7	7	8	2	8	6,4	6	8	5	2	7	5,6	5,3	4
19	No rule concerning lying can be formulated; whether a lie is permissible or not permissible totally depends upon the situation.	3	6	9	2	3	4,6	4	3	3	5	6	4,2	3,8	7
20	Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.	2	6	9	4	5	5,2	6	6	3	5	7	5,4	4,6	7
	RELATIVISM	27	33	74	33	47	**42,8**	57	39	38	43	55	**46,4**	**44,6**	**48**

Table 9 displays the scores on relativism of five interviewed surgeons, five managers and their mean values. My own scores are displayed in addition.

Table 10 provides a condensed overview of idealism and relativism scores and their homogeneity, displayed by the standard deviation.

TABLE 10 DEMOGRAPHIC RESULTS

	Groups: Surgeon / Manager	**N**	**Mean**	**Standard Deviation**
Idealism	Surgeons	5	52.80	9.203
	Managers	5	57.80	12.617
	Literature Mean	30,230	65.52	n/a
Relativism	Surgeons	5	42.80	18.926
	Managers	5	46.40	8.989
	Literature Mean	30,230	52.74	n/a

The collected data was found to be proximately normally distributed and allowed for inferential statistics. Due to the small sample size, a t-test was performed with a 95% confidence interval of the differences between the two cohorts of surgeons and managers. The 95% confidence interval is commonly used in our corporation as a standard and was thus chosen.

TABLE 11 INFERENTIAL STATISTICS

	t-test for Equality of Means					
					95% Confidence Interval of the Difference	
	T	df	p-values (2-sided)	Mean Difference	Lower	Upper
Idealism	-0.716	8	0.494	-5.000	-21.106	11.106
Relativism	-0.384	8	0.711	-3.600	-25.208	18.008
Combined	-1.117	8	0.297	-8.600	-26.358	9.158

According to the results of the independent samples t-test, no significant difference was found between surgeons' and managers' mean values for the Ethical Positions Questionnaire (EPQ) total score (p=0.297), nor for the questions on idealism (p=0.494) and relativism (p=0.711). The degree of freedom (df) is 8. Additionally a

sample t-test was used to compare the mean values of idealism to the mean reported in the literature (mean=65.52). While these results are statistically sound for the mean values, it is interesting that the individual results of my stakeholders appear scattered, especially for the surgeons' outcomes for relativism (see *Figure 12 Ethical Positions of Research Members*). I discuss meaning and sense of these issues under *4.3 Ethical Positions of Stakeholders*.

TABLE 12 IDEALISM COMPARED TO LITERATURE I

	N	**Mean**	**Std. Deviation**	**Std. Error Mean**
Idealism	10	55.30	10.740	3.396

TABLE 13 IDEALISM COMPARED TO LITERATURE II

					95% Confidence Interval of the Difference	
	T	**df**	**p-values (2-sided)**	**Mean Difference**	Lower	Upper
Idealism	-3.009	9	0.015	-10.220	-17.90	-2.54

Mean values for idealism were significantly lower compared to the mean reported in the literature (t=-3.009; df=9; p=0.015). Another-sample t-test was performed to compare the mean values of relativism to the mean reported in the literature (mean=52.74).

TABLE 14 RELATIVISM COMPARED TO LITERATURE I

	N	**Mean**	**Std. Deviation**	**Std. Error Mean**
Relativism	10	44.60	14.096	4.458

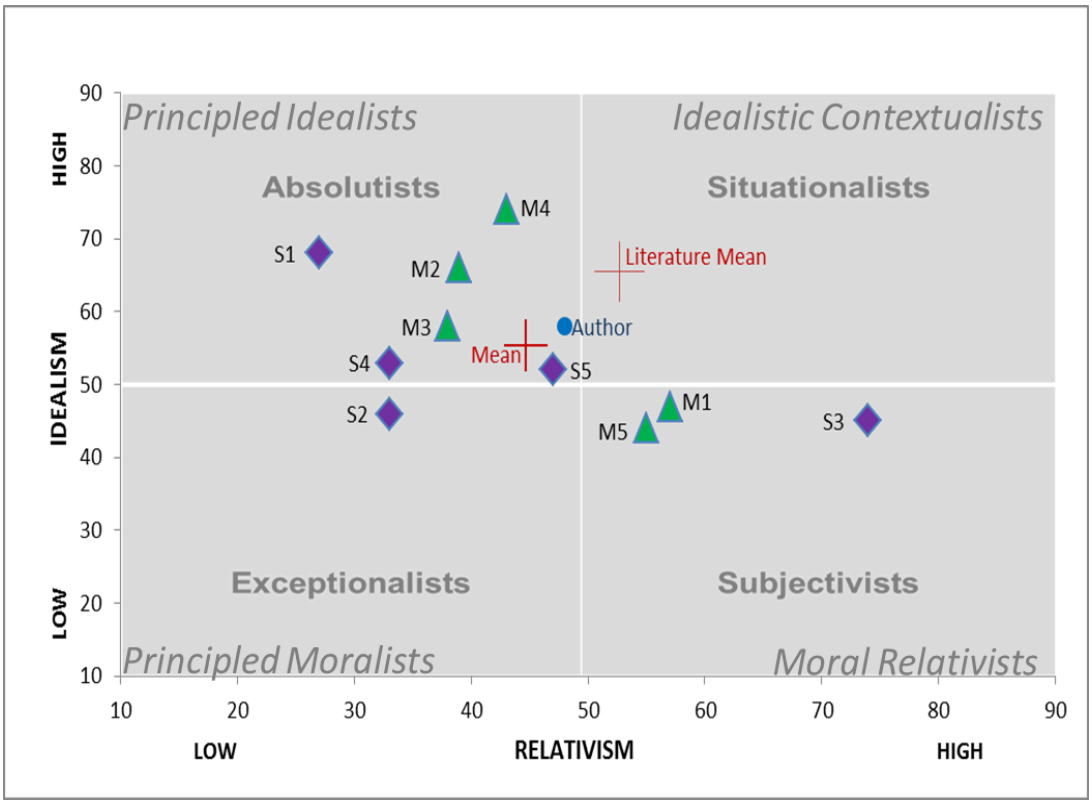
Mean values for relativism were lower compared to the mean reported in the literature, but not significantly (t=-1.826; df=9; p=0.101).

TABLE 15 RELATIVISM COMPARED TO LITERATURE II

	T	df	p-values (2-sided)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Relativism	-1.826	9	0.101	-8.140	-18.22	1.94

Figure 12 provides an overview of the results of the ethical position of the research participants. This compressed depiction allows categorising each participant into four main subgroups – absolutists, situationalists, exceptionalists and subjectivists - utilising Forsyth's classification (1980; 2016) as set out above in Table 1.

FIGURE 12 ETHICAL POSITIONS OF RESEARCH MEMBERS



Participant surgeons are pictured with green triangles (S1-S5) and managers are pictured with violet diamonds (M1-M5). Additionally, the overall mean value as well as the Literature mean and my own position are displayed.

The literature mean, based on Forsyth (2016), falls in the 'Situationalist' quadrant. Interestingly, no single participant of this study is connected to this

quadrant. Three surgeons and three managers are positioned as ‘absolutists’. Two managers and one surgeon were found to be subjectivists and one surgeon is in the exceptionalist’s quadrant. It can be seen that surgeons, compared to the interviewed managers, are more homogeneous in terms of their idealism, but more widespread in their position towards relativism.

FIGURE 13 ETHICAL POSITIONS, GROUPED

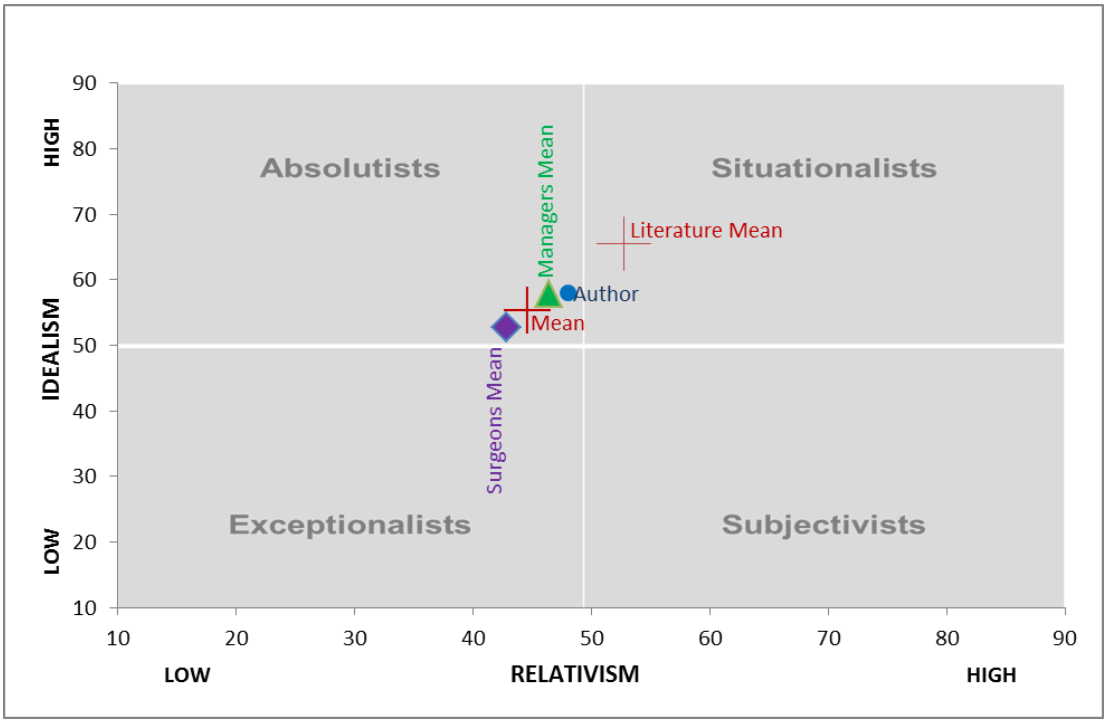


Figure 13 relativises this picture by using the mean values of the cohorts. It can be seen that, observed by the mean values, the differences between the two cohorts are marginal. Using the grouped ethical positons only, however, would lead to a distorted picture. The marginal differences of the mean values of the two groups do not reflect the individual differences found in the surveys.

Surgeons, for example, were spread over three quadrants, indicating their plurality in ethical positions. I thus use the grouped picture in the meaning- and

sense-making in the three sections after the next, but extend my narrative towards the individual results.

4.2 SEMI-STRUCTURED INTERVIEWS

In a second, parallel action cycle all ten participants, five surgeons and five managers, performed semi-structured interviews consisting of twelve open ended questions. I recorded the sessions and transcribed each interview literally. I sought to not interfere or interrupt the flow of words of the participants in order to receive unadulterated opinions that would inform my research questions RQ, RQ1, RQ2 and RQ3 as indicated in *Table 4 Addressing the Research Questions*. Only when a participant lost track of the question, I guided him or her back to the topic.

The subsequent tables (16-27) display the grouped results of the interviews. I followed the guidance of Flick and von Kardoff (2000) and coded and synthesised the topics I found addressed by the participants and brought them into order. Open and thematic coding happened through reading the transcriptions, naming and counting the topics mentioned as well as allocating the said meaning. The tables thus represent the summarised meanings and statements of the participants. This process included the compression of the collected interviews, their complex language and meanings, in order to extract the core, as suggested by Gebhardt & Mattisek (2006) and described in *2.3.3 Data Analysis*. For the ease of reading I display the results also in percentage form. All tables 16-27 contain the asked question, the individual ethical position and the coded themes that were extracted. Additionally the frequency of the themes is displayed.

Question 1 of the semi-structured interviews enquires about the topic of morals and business and addresses the main research question (RQ) as well as all three sub-research questions RQ1-RQ3. *Table 16 Coded Results on Interview Question 1* displays the condensed results. Participating surgeons are numbered from S1-S5. Participating managers are numbered from M1-M5. “X” in the table indicates that the individual participant addressed the afterwards coded theme accordingly. I extracted and coded eleven themes and brought them into order – from most frequently to least frequently mentioned.

Eight out of ten participants found it morally sound that corporation M has established its own clinics. This comprised 60% of all surgeons and 100% of the managers. Eight out of ten participants stated that in such a venture the patients’ needs must be central and a prerequisite. Seven out of ten participants found it even positive that a manufacturer would open its own clinic. This has been stated by 60% of surgeons and 80% of managers. Five out of ten participants found our venture completely similar to any doctor opening his or her private practice (80% of surgeons, 20% of managers). Three out of ten participants insisted that patients must explicitly be informed that such a clinic is owned by a manufacturer and three out of ten participants, only surgeons (60%) found that it’s morally sound to run a corporation owned clinic as patients have a choice. Five further topics were addressed by only one or two participants, of which only one stated that there could be a danger in our venture’s construction. Interestingly, two participants (both managers) found that the venture might be even morally better than a privately set up clinic, as we as a corporation might be under higher internal and external pressure for quality and outcomes.

TABLE 16 CODED RESULTS ON INTERVIEW QUESTION 1

"Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?"

	Surgeons					<--Ethical position --> Managers					
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
It is morally sound		X	X	X		X	X	X	X	X	8x
Patient needs must be central		X	X	X	X	X	X	X	X		8x
It is positive that a manufacturer of implants open their own clinics	X	X		X		X	X		X	X	7x
Morally same as if a private practitioner opens a clinic		X	X	X	X			X			5x
Patient must be informed that a medical corporation owns the clinic			X			X			X		3x
Patients have choice and power to decide	X		X		X						3x
Morally better as if a private practitioner opens a clinic						X				X	2x
The ethics of the mother corporation is good an crucial		X							X		2x
The role of the internet as a source for information	X										1x
Corporation has to produce something that is of value for receivers				X							1x
There could be a danger					X						1x

Table 16 indicates that the vast majority of the interviewed stakeholders found it morally sound, if corporation M opens their own clinics. The conditions were mainly that patient needs (and not commercial interest) must be put front and centre. The core idea of the venture was rated positive.

Question 2 of the semi-structured interviews enquires about the topic of character and individuals and addresses the main research question (RQ) as well as all the first sub-research question RQ1. *Table 17 Coded Results on Interview Question* displays the condensed results. I extracted and coded eight themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Seven out of ten participants stated that the character of the involved persons must feature a mindset of putting patient care and safety before any economic interest. This was the opinion of 40% of the surgeons and 100% of the managers. Five out of ten participants said that it is the major responsibility of our organisation to hire the 'right' kind of person (60% of the surgeons and 40% of the managers). Six more themes were coded, of which three were supported by 20% of the participants. These topics addressed the matters of being pragmatic and full of integrity.

TABLE 17 CODED RESULTS ON INTERVIEW QUESTION 2

“Is there a certain kind of character of the involved persons necessary?”

	Surgeons					<--Ethical position -->	**Managers**				
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
Patient care before economic interest is necessary	X	X				X	X	X	X	X	7x
Organisation must take care to employ the 'right' person	X	X			X	X				X	5x
Money is pragmatic reality	X			X							2x
Intergrity			X		X						2x
The persons must be embedded in a morally sound corporation								X	X		2x
Money influence must be pro-actively held low						X					1x
People must be trained in morale		X									1x
People must be willing to engage in partnerships				X							1x

Table 17 addresses the necessary character of involved people. The stakeholders indicated that a patient-before-commercial attitude must be in place, when asked about a certain kind of needed character for the involved persons. Other attributes have been mentioned, but tended to be more scattered.

Question 3 of the semi-structured interviews enquires about the topic of character and organisation and addresses the main research question (RQ) as well as sub-research questions RQ1 and RQ2. *Table 18 Coded Results on Interview Question 3* displays the condensed results. I extracted and coded six themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Six out of ten participants came to the conclusion that a professional or ethics board for the clinics would be a solution to find 'the right kind' of character for the venture. This was said by 60% of both surgeons and managers. Five out of ten participants shared their opinion that good hiring practice is key for finding suitable persons. This was supported by 60% of the surgeons and 40% of the managers. Four out of ten participants arrived at the idea of suggesting a code of conduct that formally guides the people. This idea was presented by 20% of the surgeons and 60% of the managers. Two out of ten shared their opinion that character cannot be trained, while one insisted that character can be trained. Only one participant indicated the importance of the leader as a role model to his or her team for positive ethics in a venture.

Table 18 Coded Results on Interview Question 3

“What or who could regulate the ‘right kind' of character of the involved persons?”

	Surgeons					<--Ethical position -->			**Managers**		
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
An ethics- or professional board is a solution			X	X	X	X			X	X	6x
Good hiring practice is necessary to have the right people	X		X	X		X	X				5x
A code of conduct could be a solution					X		X	X	X		4x
Character cannot be regulated or trained	X							X			2x
Character can be trained		X									1x
The leader must be ethical to ensure morale										X	1x

Table 18 displays who could regulate the ‘right kind’ of character led only to a moderately strong and common suggestion to install ethics-boards or a specific code of conduct. ‘Good’ hiring practices were suggested by half of the stakeholders.

Question 4 of the semi-structured interviews enquires about the topic of ethics in an international and multicultural environment and addresses the main research question (RQ) as well as sub-research questions RQ1 and RQ3. *Table 19 Coded Results on Interview Question 4* displays the condensed results. I extracted and coded six themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Nine out of ten participants stated their opinion that ethical measures must be adapted to local practices. This was supported by 80% of the surgeons and 100% of the managers. Furthermore, six out of ten participants found that ethical adaptations to local environments must be minor. This was supported by 40% of the surgeons and 80% of the managers. In contrast, only two out of ten participants, both surgeons, found that adaptations to local environments must be a major consideration. One participant did not want to distinguish between minor and major adaptations. Another participant shared his opinion that ethical measures should not at all be adapted locally. Finally, six out of ten participants said that a common set of moral rules must be in place globally and interpreted as a minimal common ground of ethics.

TABLE 19 CODED RESULTS ON INTERVIEW QUESTION 4

"Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?"

	Surgeons					<--Ethical position -->	**Managers**				
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
Ethical measures have to be adapted to local practices	X	X	X	X		X	X	X	X	X	9x
The adaptations to local customs are minor	X	X					X	X	X	X	6x
Common moral principles are necessary and globally present	X	X			X			X	X	X	6x
The adaptations to local customs are major			X	X							2x
Ethical measures should not be adapted locally					X						1x
Ethical measures can be nearly the same in all locations					X						1x

Table 19 addresses question on adaption of ethical measures across the globe. It led to an overwhelmingly strong support for local adaption of ethical measures. However, the majority of stakeholders insisted to have common principles in place and adapt ethical measures only to a defined, but small extent.

Question 5 of the semi-structured interviews enquires about the topic of the Hippocratic Oath as a common measure of ethics in medicine and its relation to or tension with economic needs and business. It addresses the main research question (RQ) as well as all sub-research questions RQ1-RQ3. *Table 20 Coded Results on Interview Question 5* displays the condensed results. I extracted and coded eight themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Six out of ten participants said the conflict between the Hippocratic Oath and the economic need for profit seeking is not different to any private practitioner opening up his or her own practice. This was found by only 20% of the interviewed surgeons but by 100% of all managers. Five out of ten participants shared their opinion that it is of no difference whether a clinic is privately held or a public institution. This includes 60% of the surgeons and 40% of the managers. Two out of ten, on the other hand, found a difference between private clinics and public institutions. Four out of ten participants find it no conflict if the patient needs are explicitly given priority. Also, four out of ten participants see it as a fact that there will be patients that will be left untreated due to economic reasons and circumstances. Both opinions were equally distributed among surgeons and managers. While three participants found there is no conflict of interest between the Hippocratic Oath and the economic needs of a private clinic, three other participants found a conflict. One participant, a surgeon, found the Hippocratic Oath outdated.

TABLE 20 CODED RESULTS ON INTERVIEW QUESTION 5

"How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?"

	Surgeons					<--Ethical position -->	**Managers**				
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
There is no difference to any private practitioners			X			X	X	X	X	X	6x
It is NOT different if a clinic is privately owned or publicly owned		X	X	X			X	X			5x
There is no conflict, if patient care is explicitely more important		X			X	X	X				4x
Some patients might be left untreated	X	X						X		X	4x
There is no conflict	X		X					X			3x
There is a conflict: It can be solved through a patient's first policy				X					X	X	3x
It is different if a clinic is privately owned or publicly owned					X	X					2x
Hippcrates is outdated, except "do no harm"				X							1x

Table 20 indicates that the majority of the interviewed stakeholders did not see a difference between our venture and any other private practitioner or publicly held clinic. A policy that insists on a patient-first regulation could solve a potential conflict of interest between Hippocratic Oath and economic needs. There is no consensus whether there is a conflict at all or not.

Question 6 of the semi-structured interviews enquires about the potential risks and benefits for patients of our venture of setting up company-owned clinics. It addresses the main research question (RQ) as well as sub- research questions RQ1 and RQ3. *Table 21 Coded Results on Interview Question 6* displays the condensed results. I extracted and coded ten themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Five out of ten participants stated their opinion that the high expertise due to corporate ownership is to be seen as positive. This is supported by only 20% of the surgeons but by 80% of the managers. Despite this, five out of ten interviewees mentioned the general risk that a corporately owned clinic might act unscrupulously and might not be trustworthy. This is again supported by 20% of the surgeons and by 80% of the managers. Another five out of ten found the risk for corporate clinics generally low (supported by 60% of the surgeons and 40% of the managers). Four out of ten found our corporate ownership of clinics highly beneficial for patients. Interestingly, this was stated by 60% of the surgeons. Additionally, equally distributed between both surgeons and managers, four out of ten made a positive referral to our corporate M's existing ethical behaviour, which was supportive to our venture. Five themes were extracted that were addressed only once by individual participants, including data protection, superimposing interests of the corporation in the background and thoughts about emerging markets.

TABLE 21 CODED RESULTS ON INTERVIEW QUESTION 6

"What are the potential risks and benefits for patients?"

	Surgeons					<--Ethical position -->	**Managers**				
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
High technical expertise due to corporate ownership is benefitial		X				X	X		X	X	5x
Corporate clinics might unscrupuluous / not be trustworthy		X				X		X	X	X	5x
Risks are low	X		X	X			X			X	5x
It is highly beneficial for patients	X	X	X				X				4x
Positive referral to Corporate M's ethic		X				X			X	X	4x
Corporate interest superimposes conflicts with other hospitals						X					1x
Risk that patients are not treated to best evidence based practice					X						1x
Better outcomes for patients										X	1x
Data protection is a risk						X					1x
Benefits only in emerging markets					X						1x

Table 21 presents the answers on potential risks and benefits for patients. It displays the multitude of answers: However no significant strong topic was extracted. I could only extrapolate a positive tendency for patient benefits due to corporate M's technical know-how and its ethical reputation.

Question 7 of the semi-structured interviews enquires about the opinions of the participants regarding involved stakeholders and how they could be addressed and involved. It addresses the main research question (RQ) as well as sub-research question RQ2. *Table 22 Coded Results on Interview Question 7* displays the condensed results. I extracted and coded 14 themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Seven out of ten participants considered patients to be major stakeholders of our clinic. Seven out of ten interviewees mentioned health authorities and governmental bodies as main stakeholders. Both stakeholder groups had the support of 60% of surgeons and 80% of the managers. Six out of ten mentioned other hospitals and five participants named other manufacturers as direct competitors. Interestingly, both statements are supported by 80% of surgeons but by significantly fewer managers. Five out of ten defined other departments of the mother company as competition. This view is shared by 60% of the managers. Four out of ten (60% of the surgeons) see health professionals and other clinicians as stakeholders that need to be addressed, while only three out of ten interviewees recognise the paying insurance companies as stakeholders. Interestingly, this group consists of managers (60%) only. Two out of ten, only surgeons, see the general population as a stakeholder group, while another two out of ten (consisting of managers only) have found existing groups of users of hearing implants as addressable stakeholders. Two out of ten explicitly named other doctors (not clinicians or other health professionals) as stakeholders. Another four themes were mentioned by the participants once, including staff of the set up clinic, families and specialised professionals.

TABLE 22 CODED RESULTS ON INTERVIEW QUESTION 7

"Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed, included or competed with?"

	Surgeons					<--Ethical position -->	**Managers**				
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
Patients		X		X	X		X	X	X	X	7x
Health authorities & Governance bodies		X	X		X		X	X	X	X	7x
Other hospitals are competitors	X	X	X		X			X		X	6x
Other manufacturers of hearing implants are competitors	X		X	X	X				X		5x
The mother company or departments of it			X		X			X	X	X	5x
Health professionals / clinicians, generally	X	X			X		X				4x
Insurances							X		X	X	3x
General population		X		X							2x
Other medical doctors (pediatricians, geriatricians…)		X				X					2x
User groups / self help groups						X		X			2x
Staff of the corporate clinic									X		1x
Patient families				X							1x
Surgeons						X					1x
Audiologists						X					1x

Table 22 reflects the interviewees' opinion about who the mainly affected and involved groups in our venture are. They unsurprisingly rated the patients highest. Participants classified corporation M as the driver of the venture itself more important than, for example, the local staff in a clinic.

Question 8 of the semi-structured interviews enquires about into specific thoughts of the participants on competition in our venture, especially how they would compete in the markets. It addresses the main research question (RQ) as well as sub-research question RQ2. *Table 23 Coded Results on Interview Question 8* displays the condensed results. I extracted and coded nine themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Seven out of ten participants would compete through providing better services than their rivals. This view is supported by 60% of the surgeons and by 80% of the managers. Five out of ten interviewees would refuse to compete through lower prices. This was stated by only 40% of the surgeons but by 60% of the managers. In contrast three out of ten would definitely compete through lower prices (40% of surgeons and 20% of managers). Four out of ten would position the technological superiority of the implantable devices compared to other manufacturers as a competitive advantage that needs to be marketed. Interestingly this is supported by 60% of the surgeons but only 20% of the managers. Two out of ten presented the idea of competing by generating better patient outcomes. Four themes were mentioned only once by the participants, including hiring better specialists and providing better timelines or better locations than other clinics or hospitals.

TABLE 23 CODED RESULTS ON INTERVIEW QUESTION 8

"What are your specific thoughts on competition of the venture? How would you compete?"

	Surgeons					<--Ethical position -->	**Managers**				
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
Competition by providing better service		X	X		X	X	X		X	X	7x
NO competition on price	X	X					X	X	X		5x
Technological superiority or differentiation	X	X	X				X				4x
Competition on price			X		X					X	3x
Competition by generating better patient outcomes	X									X	2x
Better specialists	X										1x
Competition by providing better timelines										X	1x
Prevent places with competition								X			1x
Worried about competition				X							1x

Table 23 displays the stakeholders' opinion that the set-up clinics should compete by providing better service or technological superiority. Half of the interviewees would not compete on price.

Question 9 of the semi-structured interviews touches on the matter of internal organisation of our venture. How would participants adapt the organisation? It addresses the main research question (RQ) as well as sub-research questions RQ2 and RQ3. *Table 24 Coded Results on Interview Question 9* displays the condensed results. I extracted and coded nine themes and brought them into order – from most frequently mentioned to least frequently mentioned.

A majority of nine out of ten participants stated that, from an organisational perspective, the matter of setting up a new business such as company-owned clinics should be separated from the existing core business of the mother company. This is supported by 80% of the surgeons and by 100% of the managers. Three out of ten participants, all of them managers (60%) insist on involving all affected internal stakeholders and to work through the necessary politics. Two out of ten interviewees shared the idea of establishing a board to address both organisational as well as ethical questions. Another two out of ten mentioned the necessity of strong leadership and the establishment of a fixed and responsible head for the venture. Three themes were mentioned only once, including having flat hierarchies, developing a pilot clinic or changing the system and attaching the corporate-owned clinics, not to corporate M's headquarters, but rather to the respective sales areas. One surgeon did not feel informed enough to share a well-founded opinion on organisational matters.

TABLE 24 CODED RESULTS ON INTERVIEW QUESTION 9

"Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?"

	Surgeons					<--Ethical position -->	**Managers**				
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
The project/venture should be separated from the core business	X	X		X	X	X	X	X	X	X	9x
Involve internal stakeholders and do internal politics							X	X		X	3x
There needs to be a responsible person / head	X	X									2x
There should be a board					X	X					2x
Develop a pilot									X		1x
Have it run by the sales areas, not centrally in headquarters									X		1x
Have a flat hierarchy				X							1x
No opinion			X								1x

Table 24 displays the very strong suppport of the interviewed surgeons and managers to separate the venture of setting up company-owned clinics from the core business of corporation M.

Question 10 of the semi-structured interviews addresses the opinions of the participants regarding leadership of my venture in my specific corporate environment and culture. How would participants lead corporate-owned clinics? It addresses the main research question (RQ) as well as sub-research questions RQ2 and RQ3. *Table 25 Coded Results on Interview Question 10* displays the condensed results. I extracted and coded nine themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Eight out of ten participants, equally distributed between surgeons and managers, state that such a venture should be organised leader-oriented. Six out of ten prefer a situational leadership style, which is supported by 40% of the surgeons and 80% of the managers. Despite the significant support for leader-oriented leadership style, four out of ten interviewees prefer a democratic leadership style or a team orientation. The former is supported by 60% of the surgeons while the latter is equally distributed in both groups (40%). Three out of ten interviewees found openness and transparency crucial for success, two of which were surgeons (40%). Two out of ten participants, both managers, insisted on the opposite of being democratic, advocating instead autocratic leadership of innovational projects like this. Two out of ten interviewees mentioned the necessity of being goal-oriented. Additionally two out of ten suggested installing a core group of specialists to lead the venture. Only one participant shared the opinion that the leader must be charismatic.

TABLE 25 CODED RESULTS ON INTERVIEW QUESTION 10

"You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based? What are the pros and cons?"

	Surgeons					<--Ethical position -->		**Managers**			
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
Leader orientation	X	X	X	X		X	X		X	X	8x
Situational		X	X			X	X	X		X	6x
Democracy orientation	X			X	X				X		4x
Team orientation in the supply chain of innovation	X	X				X				X	4x
Openness and transparency				X	X	X					3x
Autocratic						X	X				2x
Have a core group that is well trained and decides				X	X						2x
Goal oriented				X				X			2x
Charismatic			X								1x

Table 25 shows the details on the participants' opinion on leadership. The vast majority of the interviewees preferred a leader oriented style of managing our venture. A strong support for situational leadership and team orientation was found.

Question 11 of the semi-structured interviews addresses the opinions and feedback of the participants regarding decision making in my venture and in my specific environment. It addresses the main research question (RQ) as well as sub-research questions RQ2 and RQ3. *Table 26 Coded Results on Interview Question 11* displays the condensed results. I extracted and coded six themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Seven out of ten participants stated that the leader should make decisions. This view was shared by only 40% of the surgeons but by 100% of the interviewed managers. Six out of ten mentioned that teams should be involved in decision making, mainly by providing, preparing and supplying a foundation for the leader's decisions. This is supported again by 40% of the surgeons and by 80% of the managers. Five participants generally state that teamwork is important and three out of ten refer again to a core group of specialists as a preferred decision making group. Only one surgeon insists on pure team decisions, while another manager raises the topic and danger of manipulation through leadership and decision making under a strong leader.

TABLE 26 CODED RESULTS ON INTERVIEW QUESTION 11

"Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?"

	Surgeons					<--Ethical position -->		**Managers**			
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
The leader / head should make the important decisions	X	X				X	X	X	X	X	7x
Teams provide, suggest and supply foundations for decisions	X	X				X	X	X	X		6x
Teamwork is important and necessary	X	X	X			X			X		5x
Core group shall decide / sub directors				X	X					X	3x
Manipulation od people is a topic						X					1x
Teams decide			X								1x

Table 26 shows that the majority of the stakeholders preferred that the leader should make decisions, especially in innovational environments. They understand teams and teamwork mainly as support for the leader to provide a solid basis for informed decisions.

Question 12 of the semi-structured interviews finally addresses the opinions and feedback of the participants regarding dilemmas and paradoxes that might appear through corporation M's culture of harmony-seeking versus its striving for being an innovation driver in the field. It addresses the main research question (RQ) as well as all sub-research questions RQ1-RQ3. *Table 27 Coded Results on Interview Question 12* displays the condensed results. I extracted and coded nine themes and brought them into order – from most frequently mentioned to least frequently mentioned.

Nine out of ten participants generally find that tensions caused by being both a harmony-seeking organisation and an innovation driver can be overcome. This view is supported by 80% of surgeons and 100% of managers. One surgeon stated that tensions must be accepted, not overcome. Seven out of ten interviewees support the view that open discussion is important for overcoming tensions. This view is shared by 60% of surgeons and 80% of managers. Four out of ten express their view that every change causes resistance in people and organisations. Interestingly, this opinion was stated by 60% of the surgeons but by only 20% of the managers. Four out of ten, equally distributed, suggest a proper corporate vision and mission as helpful, while also four out of ten, in this instance mainly managers, insist on strong, even autocratic leadership to overcome tensions. Two other participants, both managers, find non-decisions harmful regarding tensions and yet another two, only surgeons, stress the necessity to remove strong resistors from a venture like mine. One opinion was stated that tensions are useful for innovation.

TABLE 27 CODED RESULTS ON INTERVIEW QUESTION 12

"Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?"

	Surgeons					<--Ethical position -->		**Managers**			
Coded Themes	S 1 Absolutist	S 2 Exceptionalist	S 3 Subjectivist	S 4 Absolutist	S 5 Absolutist	M 1 Subjectivist	M 2 Absolutist	M 3 Absolutist	M 4 Absolutist	M 5 Subjectivist	
Tensions can be overcome	X	X	X		X	X	X	X	X	X	9x
Open discussion is important	X		X		X	X		X	X	X	7x
A 'good' vision & mission helps to overcome tensions			X		X				X	X	4x
Change induces resistance & inertia		X	X	X			X				4x
Strong and autocratic leadership is might be necessary		X				X	X	X			4x
Non-decisions are worse than bad decisions						X	X				2x
Strong resistors must be removed		X		X							2x
Tensions need to be accepted, but cannot be brought to agreement				X							1x
Tensions are good for a venture	X										1x

Table 27 displays that the interviewed stakeholders heavily supported the idea that tensions, inertia and resistance in a harmony seeking culture can be overcome, mainly through open discussions and transparency.

4.3 DISCUSSION, MEANING AND SENSE-MAKING

Action Science, as any action inquiry, leads to data that need to be interpreted carefully and through critical reflection. With the meaning making of my research outcomes I focus on Argyris' (1977) demand on increasing managerial effectiveness in order to change my organisation for the better, based on the learnings made.

In the following sections I state my interpretations of my findings from action cycles and reflect onto them in order to justify the actions taken. The nature of the results from the quantitative questionnaires and from the semi-structured interviews is different. The quantitative questionnaire provided data that can be statistically analysed and displayed. The answers of the qualitative questionnaires on the other hand share deep insights that needed to be reflected and weighed through critical thinking. Both data sets needed to finally be combined in order to develop comprehensive answers to my research questions. I did this by attempting to make and give sense (Gioia & Chittipeddi, 1991) of my results. I then developed and built the foundation for action in form of the organisational changes that have resulted (Weick & Quinn, 1999) from reflection and meaning making in this chapter. Structurally I follow the guidance of the San Francisco Edit (2017) in writing a discussion by organising this discussion section from specific to general. Therefore I discuss the sub-research questions RQ1-3 first and derive the meaning for the main research question (RQ) subsequently.

FIGURE 14 MEANING MAKING FOR SUB-RESEARCH QUESTIONS

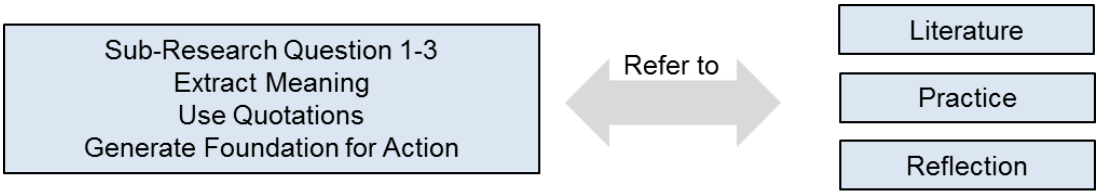
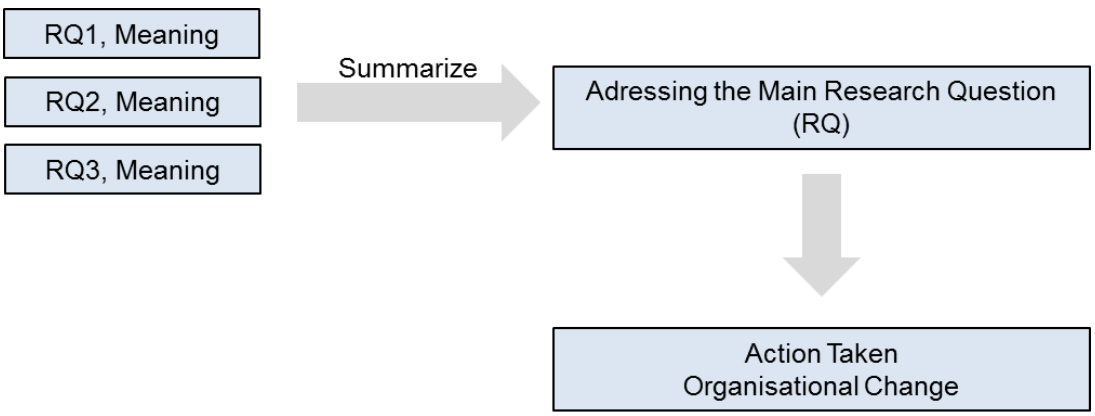


Figure 14 displays the anchors of my approach in phenomenological meaning-making for the sub-research questions by utilising the *lived experience* (Kleiman, 2007) of my doctoral research example as already described by Husserl (2013).

I discuss the necessity to make sense of my results in the innovational environment (Green & Cluley, 2014) as they relate to the individual sub-research questions, as well as link it to the specific literature (Greenwood & Levin, 2007) as used in *Chapter Three Literature Review and Synthesis*. I furthermore shed light on the practical implications and include the reflections I have had with my CEO. Through this approach I generate the foundation to answer the main research question (RQ). This sequence of processes was crucial to establish the necessary robust actionable knowledge (Coghlan, 2011). The developed knowledge then was eventually applied in form of action to bring about change in my organisational setting.

FIGURE 15 ANSWERING THE RESEARCH QUESTION AND GENERATE ACTION



It was overly fruitful to follow the guidance of the San Francisco Edit (2017) to summarize and merge the findings of the sub-research questions in order to achieve a comprehensive and practical answer for the main research question. By utilising this procedure I was forced to go into detail, while constantly having to observe the whole issue at the same time. Answering the main research question thus included summarising the meanings of the sub-research questions and providing the foundation for organisational change. Action Science (Argyris, et al., 1985; Tripp, 2005), as outlined in my approach, includes the necessity of applying action in practice (Coghlan & Brannick, 2014; Greenwood & Levin, 2007). I address both organisational change and actions taken in detail in this chapter under *5.4 Reflection on Action through Synthesis of Actionable Knowledge.*

4.3.1 SENSE-MAKING OF ETHICAL POSITIONS OF STAKEHOLDERS

My first sub-research question (RQ1) in this doctoral thesis addressed the ethical position of two main stakeholder groups from the *rich picture* of involved stakeholders as presented under *Figure 2 Rich Picture of involved Stakeholders*. With RQ1 - *What are the experienced ethical positions of main stakeholders?* - I enquired into the ethical and moral worldview of two main stakeholder groups, namely five renowned surgeons from our field and five senior managers from our corporation.

This first sub-research question (RQ1) was addressed by both the quantitative questionnaire and parts of the semi-structured interviews. Using information from both methods added to the quality of my findings. While the Forsyth questionnaire is broadly used and validated in research on a global basis, the mixture with my project-

related questions enabled me to gather more specific and robust knowledge, which I could turn to action. This additional specificity was crucial for applying targeted change in my venture. I consider this a major advantage for a mixed methods approach, as organisational change affects human aspects as well as business matters. Action taken must be built on robust developed knowledge and applied in a responsible way.

TABLE 28 ADDRESSING RESEARCH QUESTION 1

	Content of Research	RQ 1	Reference
	What is asked?	Ethical Positions	Literature Review, (Chapter 2)
Questionnaire (Forsyth, 2016)			
Qu 1-10	Ethical Individualism	X	3.2; (3.3)
Qu 1-20	Ethical Relativism	X	3.2; (3.3)
Semi Structured Interviews (Genuine)			
Qu 1	Morals and Business	X	3.2.1; 3.3.1
Qu 2	Character and Individuals	X	3.2.2; 3.1
Qu 3	Character and Organisation	X	3.2.2; 3.3.5
Qu 4	Ethics Internationally	X	3.2.3; 3.3
Qu 5	Hippocratic Oath & Business	X	3.2.5; 3.2.6
Qu 6	Risks for Patients	X	3.2.5; 3.2.6
Qu 12	Innovation and Harmony	X	3.3.5; 2.2

Table 28 is an excerpt from *Table 4 Addressing the Research Questions* and visualises which parts of the research addressed the first sub-research question (RQ1).

4.3.1.1 ETHICAL POSITIONS - MEANING AND SENSE-MAKING

The results of the quantitative questionnaires, on one hand, showed no significant differences between the ethical positions of surgeons and managers in my cohort as

pictured in *Figure 13 Ethical Positions, Grouped*. The research participants claimed a necessary connection ethical ideology and ethical leadership as recently stipulated by Demirtas (2015). In a feedback talk with the participants the majority was surprised about this finding. Essentially they would have expected a more stereotype result, where managers would act more ruthlessly on one hand and surgeons would think more selflessly on the other (Kumaravadivelu, 2003). Instead they met homogenously in the pragmatic middle. Yet, this homogeneity between the groups however features two sides of the same story. On one hand it reflects the pragmatism of the individuals I experienced. On the other hand it covers and averages individual differences that were found.

Individual positions were widely distributed in all quadrants provided by Forsyth's classification table (Forsyth, 1980), except for the situationalist's quadrant. This is interesting as the literature mean from more than 30.000 people across the globe was found in exactly the situationalist's quadrant (Forsyth, 2016). Furthermore, not a single participant of my study was classified as a situationalist. On the other hand, the mean values of both surgeons and managers are very central in the graph, close to the borders of all four ethical positions. I call this central position the pragmatic middle of ethical behaviours (Wingfield, 2013), which is where I found myself as well. I found this pragmatism in each interviewed participant despite their individually different worldviews. Both managers and surgeons have thus been found to be pragmatic in their morals and ethics based on the quantitative questionnaires. The information from the qualitative semi-structured interviews and respective questions as outlined in *Table 28 Addressing Research Question 1* adds detail to the worldviews of the participants and addresses the experienced heterogeneity. This pragmatism can be seen in the statement of surgeon S2, being an exceptionalist who agreed it was morally sound for a company to open its own clinics with a pragmatic:

"…...it's [just] another kind of private practice".

Manager 2, an absolutist, agreed with this view, also quite pragmatically by noticing:

"Without these clinics, some patients in specific locations would be worse off than they would be now".

This pragmatism, or perhaps reflective realism, has been found in the statements of the majority of the participants. It was surprising that none of the participants found it immoral or unethical for a corporation to open its own clinics. This finding is of utmost importance as it confirms one of our main initial concerns of how ethical it is, if a corporation runs their own clinics. It is, of course, difficult to generalise these findings. However, they are an interesting indicator. I consider the findings based on Forsyths questionnaire (2016) valid, as recent research confirmed its broad applicability to measure moral though tof individuals (Hrenyk, 2015).

Another important learning from the interviews is the pragmatic insistence of the participants (nine out of ten) that ethical norms vary across the globe and need to be adapted in my venture, an opinion which is in line with literature (Korthals, 2008; Shafer-Landau, 2013). See also *3.2.3 Ethics and Values in an International Context*. This is remarkable in as much, as six out of ten participants were classified as absolutists. Surgeon S3, a subjectivist, addressed this issue with:

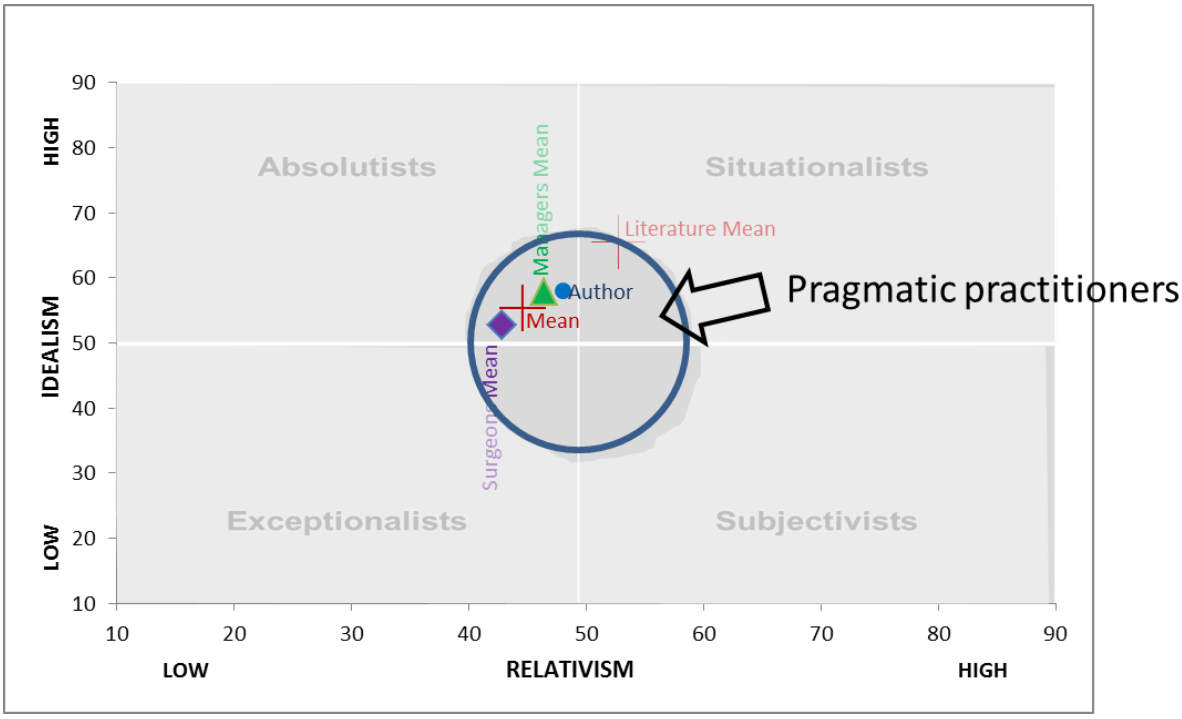
"You have to adapt what it takes to adapt to account to different viewpoints and different cultures".

On the other hand, the participants insisted on having common, basic ethics for anywhere in the world. Surgeon S5:

"I think the ethical norms would be the same in terms of the fundamental of 'do no harm', place the patient first. Those sort of fundamentals for healthcare would be applied to a venture like this. I think what you would need to do is very clear, based on candidacy criteria. So that you couldn't be criticised for implanting a patient for example with a cochlear implant who in the majority of the world would not be considered a candidate".

Figure 16 reflects the summary of experienced ethical positions of my research participants.

FIGURE 16 REFLECTED ETHICAL POSITIONS



In essence the participants were found to be ethically pragmatic in the sense that they considered the practical implications of the venture from a realist's perspective, which is seen as a contradiction to absolute idealism. However, this practitioner's pragmatism is to be substantiated and attached to a common basic understanding of ethics and morals.

4.3.1.2 ETHICAL POSITIONS - CORRELATION WITH LITERATURE AND PRACTICAL IMPLICATIONS

As shown in the previous chapter the mean values of managers' and surgeons' ethical positions slightly differ from Forsyth's average over 29 countries (Forsyth, 2016). From this perspective, the findings from my research participants, as well as from me, are similar to those reported in the literature. From a more detailed perspective, however, the participants showed significantly lower idealism compared to the population described in the literature, while their ethical relativism is also lower than the global average, but still not significantly so. Surgeons turned out to be even less idealistic than managers. This finding, despite being not significant, is not only surprising, but even counterintuitive. Manager M2 commented on this during a reflective conversation:

"If you think of it, it sounds logic: Managers as well as surgeons are constantly in a position where they need to decide. So they have to be more absolutist [and not relativist]. They became pragmatic [and thus less idealistic] over time…through experience."

From this perspective my findings make sense in a way that my participating stakeholders have to be decisive and pragmatic in their daily working life. After reflection, I therefore allocated all mean behaviours as *pragmatic practitioners,* positioned as indicated in *Figure 16 Reflected Ethical Positions*. This pragmatic view of the given situation is in line with Jotterand's (2005) view of a contemporary interpretation of the Hippocratic Oath, or as surgeon S4 put it:

"I would argue: be careful with the Hippocratic Oath, because it's relatively sexist and is in many aspects exceedingly outdated […] with the exception of the fact that is: 'first do no harm'…".

The most apparent difference of my research outcome is that Forsyth found the global average to be situationalists, idealistic contextualists who favour securing the best possible consequences for all concerned, even if doing so would violate rules of right and wrong. However, not only were none of my participants found to be a situationalist, but rather the average was found in the pragmatic corner of ethical absolutism, a position in which principled idealists believe people should act consistently with rules to yield best outcomes.

On reflection, I found my research participants strongly in line with Aristotelian thinking, in which morals and values of involved persons must be 'good' at any time (Holt, 2006) This intrinsically fosters pragmatism. Neither neoliberal views (Friedman & Friedman, 1990) as described in *3.2.1 Ethics and Values in Business* nor overly idealistic or absolutist views (McDonald, 2010) were observed. The participants unanimously underline the necessity of a 'good character' of the involved persons, especially of the leader, much as described in Badaraccio's (1992) constructive

pragmatic view and based on a common minimum foundation of ethical rules. Manager M4 describes this as:

"There are some universal principles that should be adhered to, regardless to from where people are from, but with adaptations".

This refers back to the ideas of Aristotle's virtue ethics, as described by Poon and Hoxley (2010), where the individual person is set into the centre of one's thinking and actions. Even though my research participants lack a sense of Kantian deontology, they positioned themselves as consequentialists, where the outcome justifies for the means of actions see *3.2.2 The Role of Character.* The condensed practical implications of these findings and extracted meanings can be described as in table 29.

My findings add to the literature on the ethics positions of Forsyth (Forsyth, 2016; Davis, et.al., 2001) by providing specific insights to senior managers' and surgeons' ethical thinking. I close the gap for our specific environment and provide practical implications for action.

The practical implications of these findings were manifold. It is an important insight that my research participants are pragmatic in their worldview. This finding reduces reservations against new, even radical projects in our corporation. The demand for common minimal guidelines and patient centred thinking enables action for future change activities in our venture. The realisation that ethics and morals differ across the world led to the initial action as the result of this thesis. I detail this action cycle in *Chapter 5 Reflection on Action*.

TABLE 29 FINDINGS AND PRACTICAL IMPLICATIONS I

Findings	**Practical Implications**
Ethical positions among my research participants vary. However overall their mean ethical position does not significantly differ from the global average	Participants are ‘pragmatic practitioners’. Do not support ethical absolutism nor out-of-hand-relativism in the set-up of company-owned clinics
Participants tend to be more absolutist and individualist than the global average, with a strong virtue ethics point of view	The medical environment, probably through our double role of being manufacturer and operator of a clinic, needs a stronger ethical compass than the average
It is common sense that minimal common ethic rules must be in place	Introduce common minimal guidelines and rules, probably based on the ‘do no harm’ postulate of Hippocrates
Ethics and morals differ across the world and must be adapted locally	Adapt local management and staff where necessary by hiring locally, where possible
Surgeon’s and manager’s ethical positions, on average, are similar	No need to address surgeon’s and manager’s ethical positions separately or with different moral approaches
Patient focus is central	Foster patient focus

4.3.2 SENSE-MAKING OF THE ORGANISATIONAL IMPACT

With the second sub-research question (RQ2) I addressed the organisational adaption and impact of our venture of setting up company-owned clinics. For me, most important was the view of the two stakeholder groups in terms of how they would see implications in our organisational setting that could lead to adaptive action. Will their insights and suggestions be again of pragmatic nature?

TABLE 30 ADDRESSING RESEARCH QUESTION 2

	Content of Research	RQ 2	Reference
	What is asked?	Organ. Impact	Literature Review, (Chapter 2)
Semi Structured Interviews (Genuine)			
Qu 1	Morals and Business	X	3.2.1; 3.3.1
Qu 3	Character and Organisation	X	3.2.2; 3.3.5
Qu 5	Hippocratic Oath & Business	X	3.2.5; 3.2.6
Qu 7	Stakeholders	X	3.2.4; 3.3.1
Qu 8	Competition	X	3.2.4; 3.3.1
Qu 9	Organisation	X	3.3.2
Qu 10	Leadership & Corp. Culture	X	3.3.3; 3.2
Qu 11	Decision Making	X	3.3.4
Qu 12	Innovation and Harmony	X	3.3.5; 3.2

Table 30 is an excerpt from *Table 4 Addressing the Research Questions* and visualises which parts of the research addressed the second sub-research question (RQ2).

This second sub-research question (RQ2) was addressed through parts of the semi-structured interviews as shown in *Table 4 Addressing the Research Questions*. It was important to me to learn about the views and suggestions form outsider specialists (the surgeons), which could inform organisational change in my venture. In addition I wanted to generate feedback and suggestions form insider specialists (senior managers). It is again a two-tier approach to extract the optimum of robust knowledge for potential organisational change in my Action Science inquiry.

4.3.2.1 ORGANISATIONAL IMPACT - MEANING AND SENSE-MAKING

The matter of expected and experienced impact of our venture was addressed through parts of the semi-structured interviews, as indicated in *Table 30 Addressing Research Question 2*. A major feedback of the research participants was their view that

it is not unethical for a corporation to run its own clinics. If this had been the case, it would have caused the severest organisational impact – thinking of shutting the venture down or selling it. Regarding this fundamental question, Manager 5 stated:

"I believe it is morally sound, because our intention is to improve care for patients".

However, the participants felt that in addition to have the Hippocratic Oath in place, it would be necessary to have an additional corrective or supervising body, either in the form of an ethical board or through a specific additional code of conduct in which patient needs would be explicitly be placed first, or as surgeon S3 put it:

"Yes, I mean, boards don't regulate our character, but they regulate the clinic to make sure that everything is up to standard".

This view is also reflected in the participants' ranking of the influence of stakeholders (Nygaard, et.al., 2017), where they ranked the patients and the value of our clinics' services for patients highest. While the vast majority of the participants agreed with the view that from the organisational perspective the management of such a new venture should be separated (Christensen, 2011) from the corporation's core business, only a few spoke of the danger of internal resistance and inertia against change and innovation in organisations (Hannan & Freeman, 1984).

This was surprising to me, especially as it has been one major and practical experience of mine throughout the set-up phase. Leadership and decision making in such a venture was seen quite homogeneously: The vast majority preferred a leadership oriented organisation in an innovation venture such as ours. While

situational leadership was mentioned often, still the matter of team orientation was mentioned regularly. Manager M3 noted herewith:

"I think I tend to leadership decisions, which is often in conflict to our company culture that is very very democratic: I don't always agree with that. I think there should be input from the team, but in the end the leadership needs to make the decision, because they have to justify the decisions".

The participants found that this tension between leadership orientation and our existing corporate culture of harmony seeking can be overcome through separation from the core business and a strong culture of open discussion in the corporation (Stacey, 2011). This is in line with my personal beliefs.

4.3.2.2 ORGANISATIONAL IMPACT - CORRELATION WITH LITERATURE AND PRACTICAL IMPLICATIONS

The view of my research participants in terms of strategy correlates with my personal one as well as with the literature discussed in *3.3.1 Strategy and Innovation*. They support Porter's view on necessary segmentation for competitive advantage (Porter, 1980) as well as his view on the orientation towards valued outcomes for patients (Porter & Teisberg, 2006; Teisberg, et al., 1994).

Interestingly, and in line with my cited quote of Bettencourt and Brown (2013) under *3.3.1 Strategy and Innovation*, all participants recognised the importance of service orientation in our venture. Contrary to my personally gained experience throughout the set-up phase of the clinics the participants did not think of inertia and emotional resistance as described in the literature (Otten, 2016; Lüscher & Lewis,

2008). This might be due to the fact that I did not explicitly ask for it, but had only addressed it between the lines. With the leadership orientation of my venture, my research participants are in line with the discussed literature, but tendentially more autocratic than my personally applied style throughout the venture so far.

The participant's majoritarian suggestion for open discussion and transparency is partly coinciding with my personal world view and reflects the literature (Steyn & Niemann, 2010).

TABLE 31 FINDINGS AND PRACTICAL IMPLICATIONS II

Findings	**Practical Implications**
Participants do not find it unethical for a corporation to have its own clinics	From the ethical point of view corporation M can continue with the business model
An additional supervising body and strengthened code of conducts are suggested	Initiate the discussion of implementing an ethical board. Implement a patients-first rule in the mission statement of the clinics
Patients are seen as the most important stakeholders	Improve patient focus
Competition is seen as necessary, but to be executed through a service- and patient-value oriented business model, not price competition	Compete through service orientation. Set up a project to evaluate whether outcome values for patients can be detected and marketed
Organisational resistance and inertia for innovational change is underestimated by the participants	Provide sufficient feedback on experiences made
Leadership oriented, yet situational style is favoured in innovational change	This is in line with my personal belief system and my applied leadership style.
Tensions between driving innovation and a harmony-seeking corporate culture can be overcome	Separation from the core business is necessary. Improve open discussion among teams and departments

However, in reflection this call for transparency lacks detail on necessary politics in radical ventures (Grey, 2010) in order to carry new projects through resistance and organisational inertia. Also, from a practical perspective and from experience, it needs a good dose of both to make projects successful. These findings fill a gap in literature that concerns the question of whether or not it is ethically correct if a manufacturer of active implants runs their own clinics. For our venture the outcomes are crucial as it set the ground for further developments of the whole business.

Finally the participants' views correlate with my cited literature about the necessity of separating radical innovations from the core business (Christensen, 2011) and that tensions between harmony seeking and innovation driving in a corporation can be overcome through extensive communication (Stacey, 2011).

The condensed practical implications of these findings and extracted meanings can be described as outlined in *Table 31 Findings and Practical Implications II*. The practical implications of my findings about the organisational impact enabled several actions to improve our venture of setting up company-owned clinics.

4.3.3 SENSE-MAKING OF EXPECTED PARADOXES BETWEEN ETHICS AND INNOVATION

With the third sub-research question (RQ3) I sought to address paradoxes between ethics and innovation in my specific venture. Like for the first two sub-research questions, I based my findings on the reflections of two tiers. In this case, firstly to the specific scores of the quantitative questionnaire and secondly on questions from the semi-structured interviews. The challenges of finding these paradoxes were in

making sense of the participant's answers and questionnaires without having addressed the matter directly, for example, through a specific question.

TABLE 32 ADDRESSING RESEARCH QUESTION 3

	Content of Research	RQ 3	Reference
	What is asked?	Paradoxes	Literature Review, (Chapter 2)
Questionnaire (Forsyth, 2016)			
Qu 1-10	Ethical Individualism	X	3.2; (3.3)
Qu 1-20	Ethical Relativism	X	3.2; (3.3)
Semi Structured Interviews (Genuine)			
Qu 1	Morals and Business	X	3.2.1; 3.3.1
Qu 4	Ethics Internationally	X	3.2.3; 3.3
Qu 5	Hippocratic Oath & Business	X	3.2.5; 3.2.6
Qu 6	Risks for Patients	X	3.2.5; 3.2.6
Qu 9	Organisation	X	3.3.2
Qu 10	Leadership & Corp. Culture	X	3.3.3; 3.2
Qu 11	Decision Making	X	3.3.4
Qu 12	Innovation And Harmony	X	3.3.5; 3.2

Table 32 is an excerpt from *Table 4 Addressing the Research Questions* and visualises which parts of the research addressed the third sub-research question (RQ3).

Hidden beliefs cannot be addressed by direct questions and must be extracted by reading between the lines or, for example, by listening to the tone of participants' answers and words. Action Science is an approach that fosters uncovering hidden beliefs and deep motives (Argyris, et al., 1985). To me it is of importance to be aware of such agendas, especially when it comes to taking action and triggering change in organisations. I discovered meaning in this regard from the questions as shown in *Table 32 Addressing Research Question 3*.

4.3.3.1 PARADOXES - MEANING AND SENSE-MAKING

I uncovered minor paradoxes concerning the ethical position of individual participants, as found in the results of the questionnaires *4.1 Quantitative Questionnaires* and specific statements that were made. The individuals most different from other participants were surgeon S1, an absolutist with low measures of relativism and surgeon S3, a subjectivist with high relativism. Interestingly, the results from their questionnaires were coherent with their opinions also during the interviews. I already cited surgeon S3 with:

"You have to adapt, what it takes to adapt to account to different viewpoints and different cultures".

This statement is, nevertheless, consistent with surgeon S1, who addressed the topic of ethics and morals in different regions of the world similarly:

"So we need to adapt the clinics [ethics] for these needs...in every country".

Other participants were found to be more centred pragmatists (see *Figure 12 Ethical Positions of Research Members)*, also have shown consistency in their ethical views. A glance at my participants' opinions on innovation and business yields a similar picture: The individual responses on these matters were coherent and consistent. Manager M2, an absolutist with lower relativism than the average, for example, coherently addressed the matter of decisions in innovation versus harmony in question 12 of the semi-structured interviews with:

“I would go for a more decisive approach and lessen harmony”.

However, on the topic of paradoxes *between* ethics and innovation in the context of setting up company-owned clinics, interestingly, none of the individuals addressed such paradoxes or incommensurateness. Instead participants talked about hurdles that could be overcome. The topic of our tension-averse corporate culture of harmony-seeking versus the tension-inducing innovation-driving through establishing clinics was addressed as hurdles, not as paradoxes. In the opinion of my research participants, these hurdles can be overcome through extensive communication, or as surgeon S3 explained it:

“Tensions can be overcome by having an open place where those feelings can be aired and where tensions can be diffused by open discussion".

Similar opinions were found on the topic of my corporation being a manufacturer and now simultaneously striving to become a carer for patients. Participants, due to their distinct pragmatism on the surgeons’ side or corporate self-interest and pragmatism on the managers’ side, I again did not detect paradoxes between the necessity of being profitable while at the same time following the Hippocratic Oath. Surgeon S1 dryly stated:

“To earn money is.[…] our reality. Everybody works for money. I do it. You do it. It’s common practice. It’s not an issue”.

Surgeon S2, an exceptionalist, concurred:

"Well I think you can help as long as you can".

TABLE 33 FINDINGS AND PRACTICAL IMPLICATIONS III

Findings	**Practical Implications**
Participants' measured ethical behaviour and their extracted statements were paradox to a limited extent	Hidden beliefs were extracted
Participants did not show paradoxes in their business and innovation views	Leadership orientation and harmony seeking behaviour can co-exist
No paradoxes between innovation and ethics were addressed - incommensurateness was seen as hurdles	Incommensurateness and paradoxes can be seen as hurdles and be overcome through extensive communication and transparency
No paradoxes between the necessity of earning money and following the Hippocratic Oath were detected	Have a strong common ethical foundation, despite the differences regionally

It must be stated that these opinions were unexceptionally founded on the prerequisite that, despite the idea that ethical views might need to be different in different regions, a common basic ethical understanding must be in place – in both the separated business unit for setting up the clinics as well as in the mother corporation. Surgeon S5 put it best, with:

"And I think whether you are an innovator or a harmonizer – ultimately, if you work for [corporation M] [and] that is fundamental for your work".

4.3.3.2 PARADOXES - CORRELATION WITH LITERATURE AND PRACTICAL IMPLICATIONS

The matter of paradoxes in action research was described by Lüscher and Lewis (2008), whose research I addressed in my literature review under *3.3 Strategy, Organisation and Innovation*. Their findings that a concomitant and narrated process of sense-making and sense-giving helps to overcome paradoxes were proven true in this doctoral thesis.

All participants were aware and, to a certain extent, either involved or informed about our venture of setting up company-owned clinics. In other words, it made sense to them (Weick, 2006; Gioia & Chittipeddi, 1991). This notion of being informed or even belonging to the venture has probably led to the view that no paradoxes are present in the project, but only hurdles that can be overcome. If one had asked me before I started this action research, I would have thought that paradoxes would play a major role in my venture. This is not the case. It might be attributed to the finding that my research participants were found to be pragmatists. Additionally, this finding forces me to realise and recognise that this emotional bond of the participants, as described by Vince and Broussine (1996), might have led to a 'blind eye' by the participants and me towards an overly naïve view of the venture.

4.3.4 SENSE-MAKING OF HOW ETHICS SHAPE INNOVATION

Alongside the suggestions of San Francisco Edit (2017) and *Figure 15 Answering the Research Question and Generate Action*, I synthesise the answer to my main research question - *How do ethics shape radical innovation in a downstream vertical*

integration project in the hearing implant industry? – from the findings of the sub-research questions (RQ1-RQ3).

In accordance with my chosen approach, I again do this through phenomenological elements such as tables combined with narrative (Creswell, 2013a). All detailed findings from RQ1-RQ3 contribute to the main research question, just as pieces of a puzzle form the final overall picture. As shown throughout this chapter, I found strong evidence that ethics shape radical innovation.

TABLE 34 SHAPING INFLUENCE OF ETHICS ON INNOVATION

Fields of Influence	**Findings**	**Implications**
Ethics and innovation	Shaping influence is present in multiple layers	The venture is complex
Ethical standpoints and business	Pragmatic worldviews were found. Do what is needed, as there is no difference between whether a company or a private person opens a clinic	It is not unethical for a manufacturer to open a clinic. Establish basic common guidelines, rules
Business and caring for patients	It is morally sound as long as the patient needs are put centrally	Establish patients-first mission?
Business and ethics in different regions	Business practice must be adapted to local ethical needs, but built on a common ethical foundation	Build on common guidelines. Hire local staff, not expatriates
Competition and ethical behaviour	Competition is necessary and good, but should be value based and focused on patient outcomes	Develop objective outcome measures
Paradoxes between ethics and innovation	No paradoxes detected. Paradoxes are seen as hurdles	Conceptualise a suitable research method for this topic

Table 34 provides the comprehensive and compressed summary of the extracted results in this research. It lists the findings and the respective implications for our venture of setting up company owned clinics.

This influence is occurring on the individual level (Demirtas, 2015) as well as on the organisational level. It comprises the matters of ethical behaviour versus economic success, as well as questions of morals versus business (Will & Pies, 2018) or of character versus organisational implications. All participants found that ethics influences innovational business in complex ways, but are not insurmountable trenches. It rather can be overcome through extensive communication and the implementation of basic, but strong common moral guidelines, that need to be adapted locally (Okpara, 2014). An important finding of this thesis is that 100% of the participants did not find our venture unethical.

After merging the outcomes of the sub-research questions to the findings and implications of the main research question RQ1, I close existing gaps in the literature by having found that it is not unethical for a manufacturer to open own clinics. This finding is new and of importance for other manufacturers, who want to open their own clinics. Additionally I add detail and validation to existing literature (Abuznaid, 2009) that indicates local adaption of ethics, if they are based on common guidelines like the Hippocratic Oath (Jotterand, 2005), as utilised in my case.

An attribute of Action Science is its potential to enquire into hidden beliefs (Argyris, et al., 1985). These hidden beliefs, however, were hard to detect through measuring objective data. I have extracted these hidden beliefs, therefore, through reading ‘between the lines’, especially from the transcriptions of the semi-structured interviews, but also through sharp attention to the tone of language that was used by the research participants. This leads to an additional subjectivist influence in the

meaning making of the results, but on the other hand, enabled deeper insights, knowledge and finally action. The direct result of utilising this 'between the lines' reading approach is the main change we implemented in our pilot clinic: while nobody directly mentioned it, after the interviews it became clear to me that we needed to install local managers (heads) of the individual clinics (Okpara, 2014).

In a first cycle I extracted this assumption as a summary of the transcripts of the semi-structured interviews. This summary included a gut feeling that I had, based on intercultural problems we experienced in our pilot clinic. These problems included, for example, inexplicable difficulties for our, at that time, European Manager, to renew licenses or to finalise certain deals with partnering hospitals. In reflective discussions with the research participants of my Senior Management cohort I found this impression confirmed by their experience. In a third cycle (Stacey, 2011) of learning and discussion with my CEO our learnings where thematised. Her experiences again aligned with our findings. Abuznaid (2009) indicates a difference of Arabic managerial ethics to Western approaches, which supports our practical findings. As one example of a learning loop I fed his insight back to the literature review of this thesis in *3.2.3 Ethics and Values in an International Context.*

The set-up manager of our pilot clinic in the Middle East was European. After her planned return to headquarters and based on the findings of this thesis, we replaced her, not by an expatriate from Europe, but by a manager with an Arabic background (Okpara, 2014). I detail this move as an outcome of experienced hidden believes in detail in *Chapter 5 Reflection on Action and Evaluation*. The findings displayed in Table 34 provided manifold opportunities to trigger change in our venture on different levels. In *Chapter 5 Reflection on Action and Evaluation* I describe the initial action we have taken, as the result of this doctoral research. This action

concerns the finding that ethical norms vary across the globe and ethical behaviour must be adapted locally.

Nevertheless it is worth reflecting also about the findings that were not transformed into action yet, but might lead to changes and adaptions of our venture in future. Establishing common guidelines, for example, is a project that must be started soon. These guidelines probably would contain a contemporary version of the Hippocrates Oath (Jotterand, 2005), but would leave space for local adaptions were needed. Such guidelines cannot be forced down the throats of the staff by the individual leaders (Davis, 2001). They rather could be developed and implemented through iterative cycles of learning and action.

CHAPTER FIVE

REFLECTION ON ACTION AND EVALUATION

Reflection and Action are main parts of my doctoral thesis. Among all actionable inquiries Action Science, as utilised in my thesis, is closest to traditional research (Zuber-Skerrit, et al., 2015). I thus chose a rather classical structure for this thesis but dedicate and add an extra chapter of this work to the specific topic of reflection and action.

I have conceptualised this doctoral research in action cycles as suggested by Coghlan and Brannick (2014) and visualised in *Figure 7 Methodology and Action Cycle*. In the following I recapitulate the stages of constructing action for organisational change through developing the workplace problem and the research questions. I

then describe the planning process to address these research questions by finding the proper sampling methods. The next cycle of taking action in my thesis was then performing the interviews and collecting and interpreting the data. Finally I reflect on the actions taken and narrate the process to the exampled directly derived actions. This overall process, again, took place in cycles and spirals.

FIGURE 17 REFLECT ON ACTION CYCLES AND SPIRALS

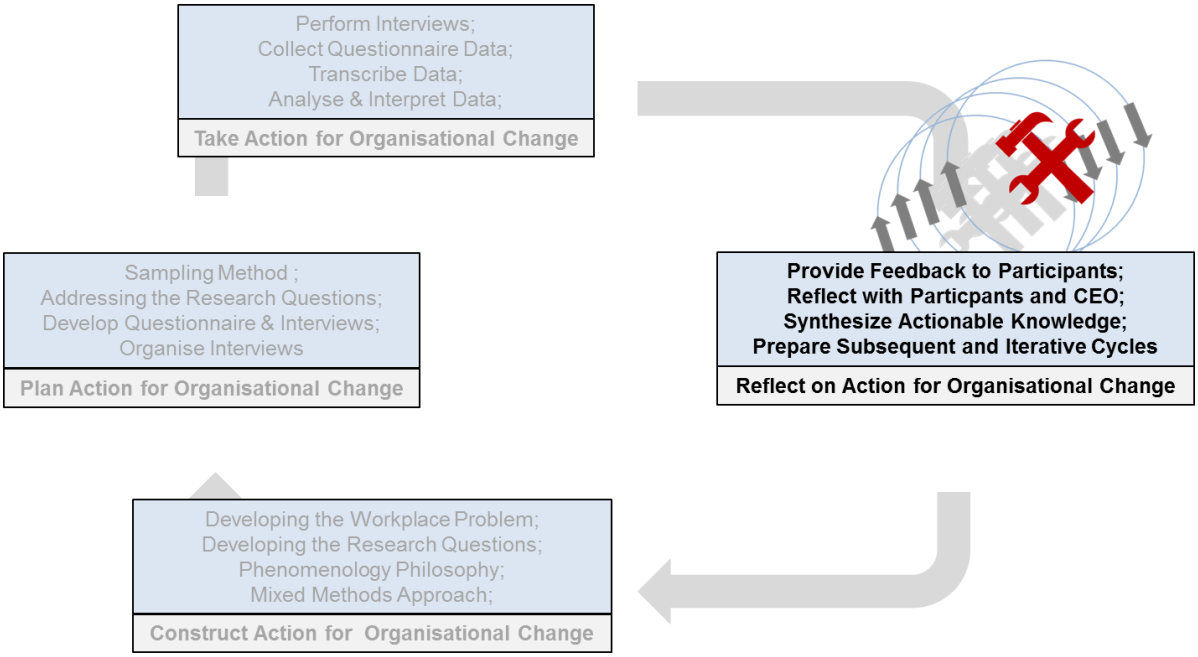


Figure 18 stylises the iterative cycles of reflection through sharing feedback, reflecting outcomes and synthesizing actionable knowledge.

This narrative is explicitly meant to focus on story-telling and criticality (Gold, et al., 2002) and thereby add to the extracted results and outcomes from the previous chapters. Story-telling furthermore enables me to discuss in-depth the experienced hidden beliefs of research participants (Argyris, et al., 1985; Raelin, 1997). I uncover these hidden beliefs in the reflection section of this chapter *5.4.Reflection on Action through Synthesis of Actionable Knowledge*. The iterative nature of my Action Science

approach led to several suggestions for action, as I indicated in *4.3 Discussion, Meaning and Sense-Making*. In this reflection on Action I focus on the initial organisational change that we have implemented as a straight outcome of this doctoral inquiry.

This action and change concerns the adaption of the hiring policy for the lead roles in our individual clinics. The reflection on the finding that ethics and morals differ across the globe changed our view on whom to hire for the head positions. In parallel this way of thinking found its way through the overall corporation. It is now generally communicated by our CEO rule to hire leadership roles locally.

FIGURE 18 ACTION CYCLE

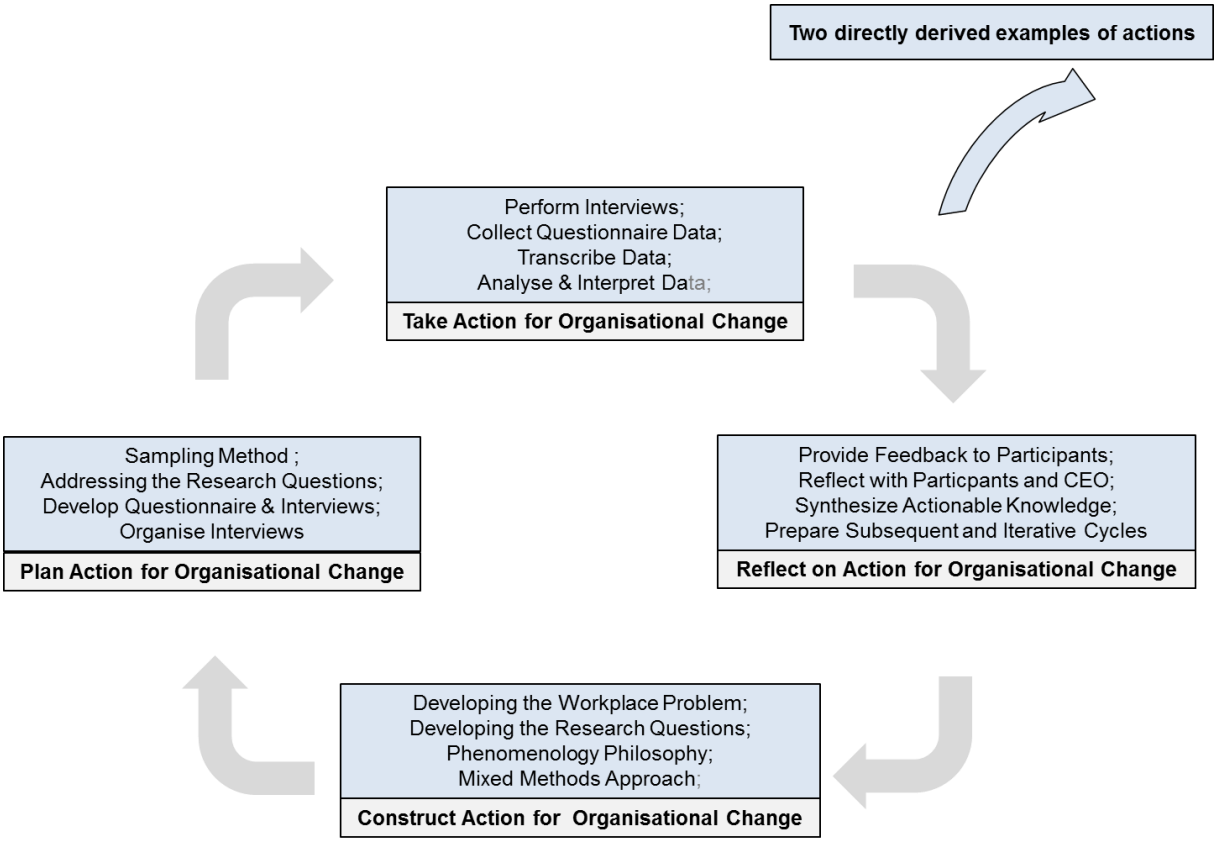


Figure 18 visualises the utilised and initial action cycles of this thesis.

5.1 CONSTRUCTING ACTION THROUGH DEVELOPING THE WORKPLACE PROBLEM

I started with the specific preparation of this doctoral thesis approximately two years before I started to write this document. This preparation included, but was not limited to, the narrowing down of the topic, the selection of approach and methodology and already the research participants I wanted to work with. Narrowing down the topic was of special difficulty to me as it should be specific and actionable, on one hand, and ensure the right balance of meaningful insights and protection of competitive advantages for my corporation, on the other hand.

Through reflective cycles with my CEO we screened the different workplace issues of the project of setting up company-owned clinics and found that the influence of ethics on radical innovation is unsolved in our venture and actionable. In retrospect I classify these reflective cycles as complex responsive processes, which were described by Stacey (2011). The setting up of company-owned clinics would have opened manifold opportunities for doctoral research. However, being a corporation under competition, one does not want to share too many insights with any third party. The continuous discussion with my CEO enabled me to incrementally exclude too sensitive topics from my research on one hand and to develop a meaningful and focused topic on the other hand. Put in simple words: the most difficult matter was not to find and describe an actionable, meaningful and scientific topic, but to establish a sound compromise between scientific curiosity and acting in the interest of my company.

After having excluded topics that were commercially too sensitive, we found that addressing the shaping influence of ethics on innovation in my thesis was very

suitable. It discusses both the academic needs for adding to the knowledgebase and the necessity to clarify the ethical dimension of our venture of setting up company-owned clinics, as described in *1.2.1 Synthesis of the workplace Problem*. It promised to be actionable and it fostered reflection and learning in change. Action Science furthermore allowed me to bridge corporate beliefs and dogmas with actionable inquiries. My CEO and owner of the corporation is deeply rooted in classical natural science research. She is academically heavily decorated, for example with the Lasker-DeBakey Clinical Medical Research Award, and dogmatically believes in traditional research. While I personally additionally believe in the power and usability of actionable inquiry, more than a compromise was found in the way of applying Action Science.

FIGURE 19 COMPLEX RESPONSIVE CYCLES TO CONSTRUCT ACTIONABLE RESEARCH

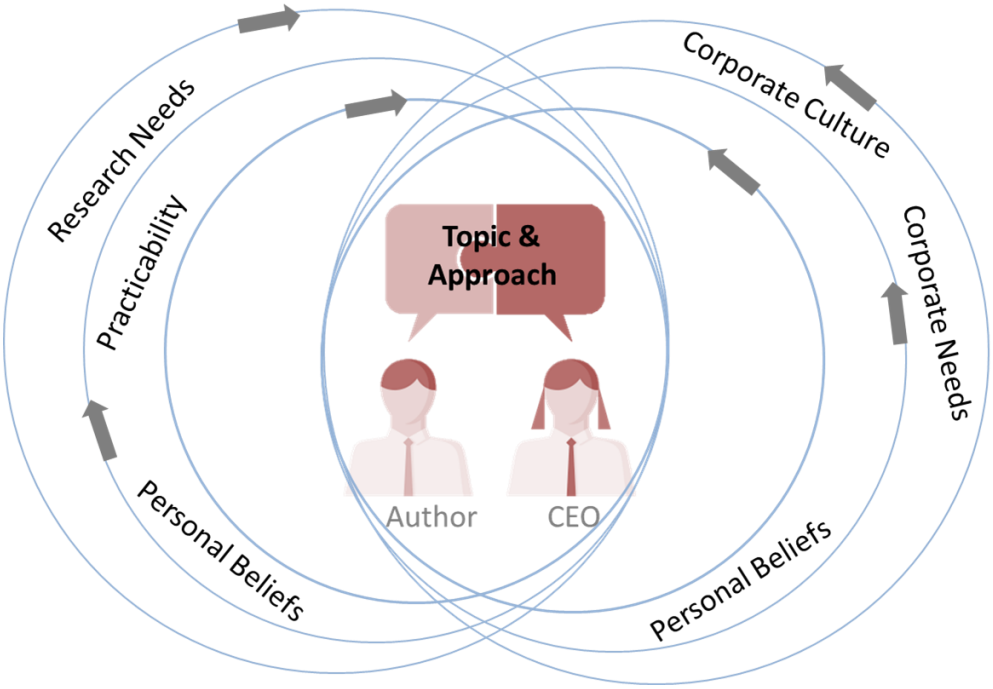


Figure 19 illustrates the compromising loops for developing a suitable research topic.

For the success of my doctoral research this compromise was crucial in order to utilise research that was accepted in my corporation and by my CEO. This chosen approach and methodology of Action Science with mixed methods and utilising phenomenology and narrative has proven to be the right research design in this study. It not only fits my personal belief system, but also supports the chosen action inquiry in order to generate meaningful insights, outcomes and actionable knowledge. The intriguing feature of narrative phenomenology for me was its promise to extract and describe the essence of experiences I made (Creswell, 2013a).

These experiences from action and reflection were achieved with a classical mixed methods approach. To me it was the perfect fit to personal preferences, research needs and environmental necessities in my corporation.

5.2 PLANNING ACTION THROUGH ADDRESSING THE RESEARCH QUESTIONS

Planning the action for the first cycle of my research work in essence was a reflective process. The main challenge to me was establishing a suitable research method to address the chosen research questions and choosing the right groups of participants, yet in a pragmatic way.

At the core of my reflections was the chosen main research question about the shaping nature of ethics on innovation. As described in *4.3 Discussion, Meaning and Sense-Making* I wanted to establish the answer to this research question through a synthesis of the three sub-research questions (San Francisco Edit, Scientific, Medical and General Proofreading and Editing, 2017), which investigated the following areas:

- the ethical positions of stakeholders.
- the experienced organisational impact.
- the undiscovered paradoxes.

I wanted to focus on two stakeholder groups that were of utmost importance for the venture.

Firstly, I was keen to cover the perspective of existing customers who might be affected of our venture but also could provide strong insights to a new business for our company. This is the main reason why I have chosen surgeons as research participants.

Secondly, I sought to enquire into our own corporate thinking. Experience and literature has shown that change projects and innovation regularly fail through corporate inertia and resistance to change (Hannan & Freeman, 1984). Thus I chose senior managers from our firm as the second group of participants. I was aware of Forsyth's work (1980; 2016) on ethical position and decided to implement his validated interview questions into my work. It was tailor-made to answer the first sub-research question.

In order to achieve deeper insights into paradoxes, organisational implications as well as on ethical positions of the stakeholders, I decided to develop a genuine questionnaire. The twelve open questions were developed in a back-and-forth process with my supervisor in order to address the research questions properly. In retrospect I consider the time of establishing and aligning these two methods (quantitative Forsyth questionnaire and qualitative genuine questions) as key processes in this thesis. It provided the necessary tools for my intended research. The final merge into a mixed methods approach was primarily of a technical nature. I finalised the planning process with organising the schedules and meetings with my participants.

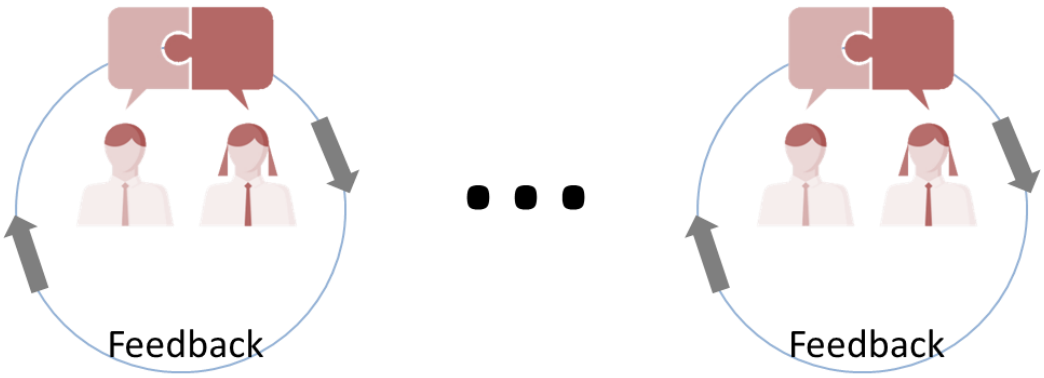
5.3 TAKING ACTION WITH RESEARCH PARTICIPANTS

I approached all of the research participants personally and asked for their willingness to participate. It was easier than expected to schedule the meetings with the research members. Since I knew all of them personally for quite a long time, the interviews and answering the questionnaires took place in a very pleasant atmosphere. Filling the Forsyth questionnaire (2016) led to similar comments from all participants, which can best summarised by the quote of Manager 1 (M1):

"Wow, this is quite tricky. I furthermore hope you do not uncover some dark aspects of my soul"

While this sounds funny, it has a serious core. Participants and the author of actionable inquiries need a good portion of openness and trustfulness for their common journey of action. The questionnaire was a good and usable opener to establish this common sense, especially as I immediately and subsequently followed on with the semi-structured interviews. I provided the headlines of the interviews and enabled the participants to talk, without interfering. I only gave guidance, if the participant lost track. During the interviews numerous conscious and unconscious feedback loops have happened between the individual interviewees and me.

FIGURE 20 FEEDBACK LOOPS IN INTERVIEWS



These individual feedback loops were crucial for me to add additional meaning and sense to the spoken words. It enabled me to better understand their comments and to detect hidden or covered beliefs. The best example for this was whether it would be necessary to adapt ethical behaviours to local environments (see Question 4 in the semi-structured interviews).

The vast majority of the participants were of the opinion that ethical measures must be adapted regionally. However no one directly mentioned that the leader of a clinic should also be from the specific region. Nevertheless I had the impression from the interviews that this was the unspoken opinion of the majority of the participants. Our approach, at that moment in time for our first clinic in the Middle East, was different. We had a European head installed there. I discussed the matter with our CEO after the transcription and analysis of my data. She immediately agreed to my understanding. It obviously was in line with her experience. Luckily, for this perspective, during that time the current head of the clinic in the Middle East decided to return to Europe and we were in the position and need to replace her.

It is not that my research triggered that exchange, but it enabled us to adapt our corporate philosophy for the clinics. The briefing discussion with my CEO about

the new head was short. We immediately agreed to hire a person from the Middle East and not a European anymore.

5.4 REFLECTION ON ACTION THROUGH SYNTHESIS OF ACTIONABLE KNOWLEDGE

Reflection is essential in any action inquiry (Weick, 2002) and necessary to address its inherent subjectivity (Greenwood, 2002; 2007). Reflection is furthermore a main tool in Action Science as it enables ‘change through reflection’ and ’through articulation of reasoning processes’ (Raelin, 1997).

This work essentially comprised reflection on three levels. Firstly, I performed a critical reflection on the overall process of this research, its methods and findings. Secondly, I provided feedback to research participants, for example, in the form of sharing the individual ethical positions; and thirdly, through an action-oriented reflection on the findings with my CEO, as described in *2.3 Methods of Data Collection, Sampling and Analysis*. The first cycle of constructing-planning-taking action and reflecting was finalised with this reflection and the next subsequent action was initiated. As indicated in the previous paragraph, this doctoral research opened several opportunities in which the acquired knowledge could be translated on practical action. I focus on two actions that have been initiated and implemented as a result of this thesis.

The first action taken derived the finding that business practice must be adapted to local ethical needs, but also be built on a common ethical foundation, see also *4.3.4 Sense-Making of how Ethics shape Innovation*. This conclusion was based on

the research, through the quantitative questionnaire and the semi-structured interviews, as well as through reading between the lines of my participants' utterances. In reflective meetings with my CEO, we came to the conclusion, therefore, that leadership positions in the clinics should be staffed with local persons. This is in opposition to how we had staffed the pilot clinic in the Middle East, whose head was European. We simply took advantage of the situation to change our internal requirements and added the respective necessity to the job advertisement and profile: *"We are hiring a new head of the hearLIFE Clinic who acts as the Managing Director / General Manager. He or she will succeed the current Managing Director / General Manager who will resettle after the successful setup. He or she must be fluent in both Arabic and English language".*

This change was the first and directly derived action from the research outcomes. It enabled us to install a new head of the clinic, who is of Egyptian origin, and has already worked in the United Emirates. The hiring of the new head was a smooth process without any resistances. It was rather the process of establishing robust knowledge to enable change, which was lengthy. Of course, it is clear that the ethnic background of a new head of a clinic is usually not a factor of resistance by the staff. However in our case we experienced a different and positive reaction. The local staff that already was employed welcomed the new head in a very kind manner. They explicitly mentioned that her ethnic background might suit better to the needs they have in treating patients and making business. This was a nice aspect of the change through action we have brought into our venture. In future it needs to be evaluated and verified whether conflicts and tensions between ethics and business innovation will change or improve.

A second action taken from the learnings of this doctoral thesis is the start of the discussion process about whether it is necessary to explicitly bring a 'patients-

first' rule into place. I hesitate to implement this change without reflection with my overall team and the CEO. The reason for this indecision is that, confirmed by the statements of the interviewed managers, it is already the internal self-conception in our venture, as well as in the overall corporate culture, to put the patient first and above all interests. This sounds romantic rather than business-like, is however the existing internal impression. The 'patients-first' rule is already implicitly implemented in our corporate values and mission and I want to prevent unnecessary redundancy. If we decide to explicitly add such a 'patients-first' policy, it would be added to our corporate strategy and personality document. This written document is setting the frame of our corporate strategy. It comprises our vision and mission as well as our corporate values and personality. The (potentially redundant) 'patients-first' policy would complement the latter part of the document.

FIGURE 21 PATIENTS FIRST IMPLEMENTATION

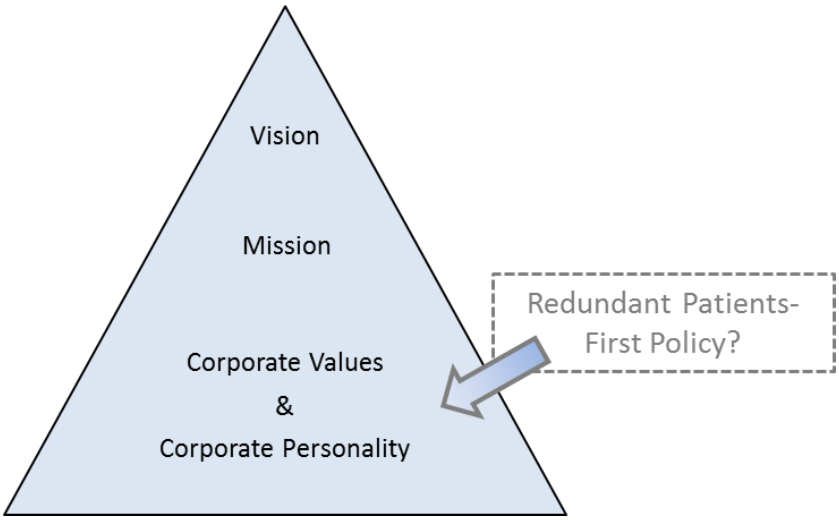


Figure 21 illustrates how a potential patients-first policy could be implemented into the corporate environment of corporation M.

The discussion of my research results additionally supports further and future action of, but not limited to:

- Initiate a research approach of paradoxes between ethics and radical innovation.
- Establish an ethics board.
- Develop and establish written common ethical guidelines.
- Develop objective outcome measures to evaluate the success of patient care.

My research unfolded manifold additional opportunities for actionable inquiry in future. This is very common in action research. Therefore my Action Science approach triggered not only the first cycles of action, for example in form of adapting the hiring policies or starting a potential patients-first policy. Instead it enabled several future cycles of action to foster organisational change in our venture. Coghlan and Brannick (2014) described these ever ongoing iterative cycles as a core element of action research. This insight feeds back to my understanding of action research as "*twin tasks of bringing about change in organizations and in generating robust, actionable knowledge"* (Coghlan, 2011, p. 54), as described in *1 Introduction*. These twin tasks are present in iterative cycles. Coghlan's view on Action research is supported by Greenwood (2007, p. 131), who described the nature of action research as following: *"Action research is neither a method or a technique; it is an approach to living in the world that include the creation of areas for collaborative learning and the design, enactment and evaluation of liberating actions … it combines action and research, reflection and action in an ongoing cycle of cogenerative knowledge*." Coghlan (p. 54) explicitly supports Greenwood: *"This richness of understanding and practice finds expression in multiple modalities, that is, action science, appreciative inquiry, cooperative inquiry, and others".*

It is this support in literature that gave me confidence in my chosen approach of Action Science. In *4.3 Discussion, Meaning and Sense-Making* I addressed a few potential topics for further actionable inquiry in form of Action Science.

5.5 LEARNING FROM ACTION AND REFLECTION

Learning is an essential part of Action Science. In this venture learning happened at several levels:

- The personal level, as writing a doctoral thesis is a major event in one's life.
- The corporate level, as the back and forth sharing of learning steps was new, but fruitful for the organisation.
- In form of reflection of and with the involved external research participants, as it provided a new form of insights into corporate thinking as well as our corporate culture.

From today's perspective reflection was one main driver of this thesis. Reflection took place in talks, consultations with my CEO and the research participants as well as through thinking about the processes and outcomes. A third reflective influence on this work occurred simply through the lengthy process of writing. All these reflections and ongoing adaptions of my actionable inquiry happened in an iterative way, as predicted by Coghlan and Brannick (Coghlan & Brannick, 2014).

The overall inquiry revealed acceptable, actionable and interesting outcomes as well as deep insights into our corporation, our customers and, last not least, into the matter of ethics in radical innovation as such. As in most action research, my findings and conclusions might not be generalisable, as in the case of classical

research, but contributes a small step towards better knowledge in the topic. I see this as a major contribution of action research. The subjective nature of my research also led to limited results for my third research question on paradoxes between ethics and innovation. Therefore, I suggest additional research on that topic. Overall, the immersed and rather subjectivist approach in this thesis was useful, especially through its detailed perceptions that enabled meaningful action. Though I generated relevant practical and actionable knowledge, I still sought, at the same time, to ensure that the work met the imperative of rigour in a doctoral thesis.

Learning from Action and Reflection however not only comprised the corporate perspective. At the same time this journey of performing Action Science and writing the thesis had a severe impact on my personal development. This development included getting acquainted to a new form of research that was distinct from the positivistic approach, which I had grown up with. It enabled me to better understand my personal belief system and approach as well as how I see the world and inquire into it. I have detailed this in *3.2.5 The Underlying Belief System* and feel that this experience has changed me towards a more holistic thinking. The biggest impression from the scientific point of view was the insight that scholar thinking and practicability is not necessarily a contradiction. It is possible to bridge this gap in order to provide both rigour and relevance.

From the professional perspective writing this doctoral thesis was of inestimable value for me. It enabled me to investigate deeper into the mechanisms of innovative corporations and at the same time to better appreciate and understand the differences and commonalities of organisational set-ups that are spread all over the world. Talking to different stakeholders, pondering about useful surveys and questions as well as reflecting about experiences has changed not only the essence of my venture of setting up company owned clinics. It has furthermore changed me. It

led to a deep appreciation about the complexity of modern business. It also led to my insight and belief that, despite the inherent complexity, change can happen in positive way.

CHAPTER SIX

CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH

In this doctoral thesis, I addressed my workplace problem resulting from the unknown shaping influence of ethics on radical innovation in our corporation's project of setting up company-owned clinics. Action Science, as a tendentially conservative research process from the action research family, turned out to be useful throughout my immersed journey of inquiring into the shaping nature of ethics on radical innovation.

It is ideally suited to my workplace problem as well as to my personal belief system. I think the strengths in the chosen approach were grounded in both its cyclic nature with critical reflection and the emergence of my conclusion from rather classically collected data. This foundation enabled rigour and relevance. Rigour was achieved through a mixed methods approach of collecting quantitative and qualitative data from validated questionnaires and semi-structured interviews, as well as through concomitant critical reflection. Relevance of the research was proven through the applicability of the outcomes translated into action.

I recruited my research participants from two existing stakeholder groups. They consisted of five renowned surgeons and five senior manager colleagues from

my corporation. They took part in my research and were involved in feedback loops in order to generate robust knowledge that could be applied in action for organisational change. I was investigating into the ethical positions of stakeholders, looking for the organisational impacts that our venture had and was searching for paradoxes between ethics and radical innovation. These insights were then used to establish a comprehensive view on how ethics shape innovation in my venture. In terms of their ethical position,

I found my research participants to be ‘pragmatic practitioners’, where the surgeons’ as well as the managers’ average score and position on ethical individualism and relativism were similar with no significant differences between each other. The mean ethical position of all participants revealed that they were tendentially absolutist, besides being centrally pragmatic. They unanimously found our venture of setting up company-owned clinics morally and ethically sound, if strong basic common guidelines were implemented.

The participants had a significantly lower level of idealism and an insignificantly lower level of relativism than a worldwide average; however, the combined average does not feature significant differences. I explain this tendency towards absolutism, within pragmatic levels, with the medical environment of our venture or through our double role of being both a manufacturer and an operator of a clinic. This would require a stronger ethical compass than the global average.

I furthermore describe the pragmatism as a potential outcome of their existing roles as managers and leading surgeons, who need to make decisions in their daily business. Additionally, It has been found that ethical norms and views differ across the globe and thus across our clinics. This led to the insight that we must adapt our ethical thinking to regional circumstances. These adaptions include hiring leader positions locally, which is an outcome of this research that occurred through

detecting hidden beliefs of the participants. In the thesis I utilise and describe the change of hiring process as an outcome of my research. I use it as an example of how I brought about change to my venture through action.

From an organisational perspective the participants furthermore preferred a leader-oriented and situationalist managerial style and suggested the installation of an ethical board to monitor and advise guidance. It emerged that a strong patient focus, and not a corporate business focus, of the venture is preferred, where competition occurs through service orientation and based on better outcomes rather than on price.

Based on the relevant literature to overcome inertia, it is suggested (and confirmed by experience in the project) to have the venture of setting up company-owned clinics structurally separated from the core business of the manufacturing mother company. No paradoxes between innovation and ethics were addressed by the research participants. They unanimously viewed potential incommensurateness as hurdles that can be overcome through extensive communication and transparency of actions. Ensuring sound ethical behaviour and fulfilling business needs at the same were not seen as contradictions. This also applies to questioned paradoxes between the necessity of earning money and following the Hippocratic Oath simultaneously.

My findings strongly indicate that my research participants' views, behaviour and suggestions on the shaping nature of ethics on radical innovation are in line with the Aristotelian philosophy of virtue ethics – striving for 'doing good' at all levels. This is a possibility to explain their as well as my own view on paradoxes.

These findings were relevant to my research and venture as it enabled two initial actions and indicated manifold future action cycles for further research. Firstly, we adapted and changed the hiring practice for our company-owned clinics,

especially their leadership personnel. To better adapt to local ethical views, in future the head staff of the clinics will be recruited regionally. The pilot clinic has seen such a change during this Action Science research. Secondly, we initiated a discussion project about whether a ‘patients-first’ policy should be implemented in writing, despite the fact that it is already corporately implemented in a tacit way.

From the academic point of view my research contributes to the existing knowledge base of ethical positions with specific sub-groups and provides initial learnings and insights as well as points of contacts. Additionally, my work suggests new research into the hardly examined field of ethics versus innovation in the medical devices industry and their downstream vertical integration towards the patient. While my results are limited and probably hardly generalisable, as in the majority of action research, I feel confident that the findings and conclusions of this work are meaningful and contributive in the best sense: meaningful for practitioners with similar challenges in their career, as well as momentous for classic academic researchers who might build on or connect to my thoughts, learnings and experiences.

This study is limited due to its emphasis on only two groups of stakeholders, which, in addition, are small in number. This led to specific actions and knowledge that emerged mainly from the subjective insider perspective. A further limitation was the limited time frame of this doctoral research and the respective small sample sizes I was able to utilise. From this perspective, Action Science can only provide a snapshot in time that induces further cycles of action and learning. As already indicated and suggested, further research and action cycles into the belief system in terms of ethics versus innovation of other stakeholders, such as public authorities, insurance companies or patients, are necessary. This would enable my corporation and me to gain further, more comprehensive insights and actionable knowledge. I

furthermore suggest additional research on the matter of paradoxes between ethics and radical innovation in order to further supplement the knowledge gained in this research. Finally, medical and technical research on outcome measures for patients undergoing implantations with, for example cochlear implants, would be useful in order to be able to compete with other hospitals based on outcome values.

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APPENDICES

APPENDIX 1: THE ETHICS POSITION QUESTIONNAIRE

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The Ethics Position Questionnaire (Forsyth 2016, 1980)

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

The Ethics Position Questionnaire contains 20 questions. Please indicate if you agree or disagree with the following items. Each represents a commonly held opinion and there are no right or wrong answers. I am interested in your reaction to such matters of opinion. Rate your reaction to each statement by writing a number to the left of each statement where:

1 = Completely disagree
2 = Largely disagree
3 = Moderately disagree
4 = Slightly disagree
5 = Neither agree nor disagree
6 = Slightly agree
7 = Moderately agree
8 = Largely agree
9 = Completely agree

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UNIVERSITY OF LIVERPOOL

1. People should make certain that their actions never intentionally harm another even to a small degree.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Risks to another should never be tolerated, irrespective of how small the risks might be.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

3. The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

4. One should never psychologically or physically harm another person.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

5. One should not perform an action which might in any way threaten the dignity and welfare of another individual.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

6. If an action could harm an innocent other, then it should not be done.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

7. Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

8. The dignity and welfare of the people should be the most important concern in any society.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

9. It is never necessary to sacrifice the welfare of others

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

10. Moral behaviours are actions that closely match ideals of the most "perfect" action.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

11. There are no ethical principles that are so important that they should be a part of any code of ethics.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

12. What is ethical varies from one situation and society to another.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

13. Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

14. Different types of morality cannot be compared as to “rightness”.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

15. Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

16. Moral standards are simply personal rules that indicate how a person should behave, and are not be applied in making judgments of others.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

17. Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

18. Rigidly codifying an ethical position that prevents certain types of actions could stand in the way of better human relations and adjustment.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

19. No rule concerning lying can be formulated; whether a lie is permissible or not permissible totally depends upon the situation.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

20. Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.

Completely disagree 1	Largely disagree 2	Moderately disagree 3	Slightly disagree 4	Neither agree nor disagree 5	Slightly agree 6	Moderately agree 7	Largely agree 8	Completely agree 9
☐	☐	☐	☐	☐	☐	☐	☐	☐

APPENDIX 2: THE HEADLINES FOR THE SEMI-STRUCTURED INTERVIEWS

UNIVERSITY OF LIVERPOOL

The Headlines of the Semi-structured Interviews

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

2. Is there a certain kind of character of the involved persons necessary?

3. What or who could regulate the 'right kind of' character of the involved persons?

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

6. What are the potential risks and benefits for patients?

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed, included or competed with?

8. What are your specific thoughts on competition of the venture? How would you compete?

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

[1] At this point a short oral description on different leadership styles is provided to the participants

APPENDIX 3: TRANSCRIBED INTERVIEWS

UNIVERSITY OF LIVERPOOL

Transcript Semi-structured Interview

Surgeon 1

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

S1: What do you mean?
GK: Is it morally sound, if a manufacturer treats patients itself?
S1: Yes, I think so. [thinks] Yes! Ys I thin, yes.
GK: what could be the implications?
S1: I think the manufacturer in this field of hearing implants know how to do the best in practice. So I think it's very positive, if a manufacturer establishes its own clinic. It's not obligatory for a patient to come to this clinic. They are absolutely free to admit to this clinic or another hospital. Depending on his advice of his doctor or audiologist. Or maybe they can find some informarti0n on the internet also.

GK: is there a downside?

S1: As there is a choice it's very good practice I think. No I think there is no negative…maybe the choice of specialists maybe […not understandable}…] who work under the company. Anyway you will choose only outstanding [laughs].

2. Is there a certain kind of character of the involved persons necessary?

GK: [explains]…involved means_: those who ar with us in the project.

S1: Oh I think, you can apply common rules to situation, if somebody applies for the job.

GK: how about the company, that needs to earn money?

S1: To earn money is..law [laughs]. It's our reality. Everybody works for money. I do it. You do it. It's common practice. It's not an issue.

3. What or who could regulate the 'right kind of' character of the involved persons?

S1: [Pause]

GK: or who could not do it

S1: I think it's a very difficult question, because nobody should regulate this kind of character, in a situation when you look for somebody to work in your company, the rules are open. You know what you want and whart kindo of man you want to work in your company.

GK: what kind of character would then be necessary for me?

S1: As said.

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

GK: What is 'good' in America might not be 'good' in Arabia. Would you adapt ethical norms in America versus Arabia versus Africa?

S1: It's [laughs]..it's another part of the questionnaire. Ethical norms are generally around the world. Of course there are some kinds of differences in social behaviour. When you need to wear something (Arabia) or hide your

hair. So we need to adapt the clincis for this needs...in every country… because other ethical norms are general …don't kill etc are similar.

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

GK: This question is on a common norm- the Hippocratic Oath: every doctor in the world swears on that. That's similar all over the world.

S1: I have done the same. There is no conflict of interest, because Hippocrat say: The patient should feed his doctor [GK laughs]

GK: But Hippocratic Oath also says: under no circumstances you should do any harm to your patients.

S1: Yes

GK: How does this balance with the economic needs maybe that a company has or a doctor has?

S1: Pause

GK: Could you not give an implant to a person?

S1: Sometimes. Yes maybe, when I say that the condition of patients and maybe some abilities will make him non-user.

GK: If you were in our position, imagine there would be a patient where the only issue is financial.

S1: from financial [view] you need to sell him an implant, but companies should have some extra charity possibilities. Maybe charity. Yes you have some charity, where you could advice patients.

GK: There is a tension between the Hippocratic Oath and economy?

S1: No

6. What are the potential risks and benefits for patients?

GK: Imagine you are patient and you would come to a clinic like ours.

S1: So the patient in this clinic that was established by a manufacturer? No I think the risks are lower than in other clinics because in this case the manufacturer will be twice as responsible. I think it will be a better choice:

GK: are there benefits as well for patients?

S1: Yes it will be benfits.

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

GK: [explains what a stakeholder is]..who would be our competitors. Who would you think we'd need to talk to?

S1: Maybe with health professionals

GK: Who would be your competitor?

S1: Competitor? Another manufacturer of the same systems?

GK: other hospitals?

S1: No, I think no other hospitals.

GK: if we would come and open up such a clinic in your city? Would you see it as a competitor?

S1: [Laughs]: YES. It's true

8. What are your specific thoughts on competition of the venture? How would you compete?

GK: with local competitors

S1: We should be better in results. Because we know the market prices will be comparable. May you will add a little bit, microscope and so far. What we need to compete on are the people. Some recognised specialists and better results.

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

GK: Imagine you ar the head of MED-EL. What would you do internally in MED-EL? Would you keep it in the system?

S1: It should be separated with its own head. He will be responsible for everything. Responsible for the staff. Every facilities. I think it's very important to have very good diagnostics and hardware and organise small departments like in a university clinic. But it should be separate.

GK: Would you hire from the MED-EL

S1: …yes, yes..

GK: .. or from the outside?

S1: yes it's possible. It depends on the people. Because in Med-EL we will find no doctors for the operations.

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK1: How would you personally lead, because we see hospitals regularly are lead rather autocratic versus MED-EL is rather democratic.

S1: Well I like the style of MED-El, so I think in this case I would want the same.

GK1: Does that [democratic] work in a clinic as well?

S1: I am democratic, but we have a very good structure in our institute. I like it. So, our chief is also democratic. But he is strong!

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

S1: Important decisions should be made by the head of the operation, but what about innovative projects and some ideas we need to collect it from anybody. Anybody who can give us something new, which will be available for the company.

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this

[1] At this point a short oral description on different leadership styles is provided to the participants

tension be managed? What other insights or comments do you have on this type of issue?

S1: Sometimes we have the same situation [laughs]. Everything is ok, but we need to something new. New ideas, new equipment that just arrived and we need to do something new with it and…. So I think we need to do meetings and stress the staff that works with us. The tensions we will have later and I think these are good tensions. Very positive tensions because they lead us to something new and they help us to introduce something new in to our work and our clinic. So I need to say that we need some reasonable tensions.

UNIVERSITY OF LIVERPOOL

Transcript Semi-structured Interview

Surgeon 2

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

S2: I think as long as the patient needs and requirements are the main goal of the clinic there is nothing, there is no moral concern. The only problem is when the corporation or the corporate issues become ahead of patients' needs. But as long as it is just based on patient needs and trying to get the best for the patient that will mean there is no moral concern.
GK: Is that different to a person who wants to be a private practitioner?
S2: No, actually it's the same. They both may have money issues instead of patient issues and they would have maybe both be immoral…one or the other….or they would have both the main focus on patient satisfaction and patients' well-being. And then it's another kind of private practice.

GK: This leads me to the second question:

2. Is there a certain kind of character of the involved persons necessary?

S2: What do you mean with character?

GK: Do this people need to have a special character

S2: Well of course, they need…but not to work for clinic in a corporation – you need to have a character being morally trained and morally focused and thinking about patients benefits. And this will happen in private practice, in a clinic of a corporation or in a public system. But the opposite could happen in public system, in private practice or in a clinic of a corporation. So the only character the doctor must have…..[not understandable..] thinking of patient rather than of his home or own needs or boats or fame or glory or whatever. So as long as he is thinking of the patient…so thinking of the patient is the main character to me.

GK: This leads to the third question, which is…

3. What or who could regulate the 'right kind of' character of the involved persons?

S2: Wow, that's a difficult question.

GK: If you think of a venture like ours..

S2: Yeah…Who must control the character?! I don't know. I…think the problem with aaahhmm.

GK: If it were yours, how would you choose people…?

S2: If it was mine? By knowing them…looking how they treat patients, how they work. But are we talking about having a superstructure..? The problem with these superstructure is that they not always will reflect what you are looking for. So the only…the problem with moral is that the only way to control moral is that this may even not happen in this superstructure…taking care of the moral of others. So I don't think an organisation taking care of the character is the right thing. I think somebody must be there with a known prestige or known moral attitude and be responsible of the people working with him.

GK: The fourth question is again into that direction…

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

S2: I think there is a range in this question. There are things that are very easy to accept and implement on one of these settings. For instance if you have to cover your hair in a given country it is very easy to accept this... But there are things that go beyond this. Considering another culture what goes beyond of moral…and covering the hair is no problem but treating persons bad or separating people depending on their colour are things that in my opinion are not possible to include in your kind of work.

GK: would you adapt ethic measures?

S2: Some should be adapted, some couldn't be adapted. I couldn't work in a place with racism but I can accept minor differences…if Jewish ones want t have their hair and head covered…this makes no difference. But if you kill people or you don't accept black people or poor people then this shouldn't be done. I couldn't do that.

GK: Ok, in the medical field, the Hippocratic Oath plays a major role, that is the fifth question…

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

S2: I think we all have an economic interest in what we are doing. So the Hippocratic Oath – the idea of doing what is good and not be harmful to others and this is not incompatible, in my opinion, with earning money; as long as you earn money in an ethical way. And you could put 2 cochlear implants to people who don't need one and this is non ethical; or you could put two cochlear implants who need two and this is absolutely ethical. And you are ther to have some profit to keep on with your development and your progress.

GK; In a poor country, if a child shows up in your corporate clinic, but they cannot afford? What then?

S2: Well I think you can help as long as you can. You cannot provide cochlear implants to everybody or every deaf child in the world. But you should try to help as many people as you can. So , if there's any chance of getting some

funds for children with hearing loss…I would start with children (!) with hearing loss, not with adults – which also a moral issue, but I think kids— completely deaf children- you can help them and it's your obligation to do it. As long as you can go.
GK: Ok, if you think about our setup of corporate owned clinics…

6. What are the potential risks and benefits for patients?

S2: Let's start with the benefits. I think if a company like yours that has the experience and that has shown that economic profit is not the main goal, establishing a clinic gives the patient the chance to get a complete coverage of the hearing needs. Since you have everything from bone conduction to ABI [Auditory Brainstem Implant). This is in my opinion the best advantage. And the disadvantage is – like a private clinic – you are under risk of putting money in front of patience---but you have the same situation---I don't see a difference between the corporation and the private clinic. I mean the corporation needs money and the private doctor – I have a private practice – want money. But I want money not at any price. I want money at a price I can see good.

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

GK: [Short explanation of stakeholders, as persons and organisations that might be affected, competed or involved in a venture]
S2: I think the influence will come mainly from the authorities, health authorities, as for private practice again…you need to make sure that everything is right organised, correctly organised. I think you need to connect with doctors, local doctors, because in the private sector it will be seen my firm, it will be seen my company and you should discuss the situation with the people around because otherwise you will have a bad input from them. And of course you should consider and take care of the population, beside the three main pillars of ….you will base the construction of your situation.at least for me.

GK: Ok, when we specifically talk about competition, that's the eight question...

8. What are your specific thoughts on competition of the venture? How would you compete?

S2: Competition with the others? Ok competition will be with other sectors doing cochlear implants and hearing restoration. Public system: you will not be a competitor.

GK: Imagine I would set up one clinic in your city!?

S2: Ok, you will not compete with the public sector, because they would be more than happy if a patient goes there [to the corporate clinic] and you would compete with private practice. So private practitioners doing otology and doing hearing surgery they would feel this as a direct competitor.

GK: How would you compete?

S2: How? I would just start and try and let the people know. I would just focus on my business [not understandable]..

GK: Would you compete on price, or…

S2: Ahh you mean…Would you compete on price? I think if you make it on price, because you have an easier access to the implant- so you may compete on price- I don't know, if this is very…I don't know, if I would like that…seen from the other position, I am on the practitioner side, I don't think I would like to have a competition on price, because they [we, the corporation] are more powerful than me. I don't see this as a very good approach. I would compete mainly on quality. To me that is the best. "We are the best in implants; you can get everything from a hearing aid…get almost everything from a hearing aid to an ABI"… So you offer everything. You can go to different places and you can get different things, but here you can get everything.

GK: Then let's change perspective, and again: imagine it is your corporation

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

S2: So how do I organise the corporation

GK: yes, within our corporation. You set it up within MED-EL, then you'd have this idea….how would you organise it?

S2: You mean…

GK:…from an organisational point of view …day by day…with coordinating part in headquarters. Would you separate it from core business?

S2: day by day…ohh…wow that's difficult. I think if you set something like this you need somebody in the headquarters to be responsible; even if it is just one clinic. I think you need a person taking care of this, because this may create a lot of problems and needs. So I think a person responsible for that. Then inside you need a doctor, a nurse – nurses -, you need a speech therapist and a rehabilitationist and people for surgery. And depending on the amount of patients that you have, you may have just one working team or you may need two or three. But I obviously would start with one and have somebody creating a bridge and be responsible there and corporation with the people in Innsbruck.

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: I ask this question because, the leading in an OR is completely different to the leading in a marketing department. So how would you lead it?

S2: I think you need to work….I don't think autocratic systems work perfectly. And I don't think democratic systems work perfectly. I think you need to find an intermediate situation, where the team is working. You need a team. Marketing…surgery…rehabilitation. What I have always said of cochlear implantation is that the surgical part is not the most important. The most

[1] At this point a short oral description on different leadership styles is provided to the participants

important part of cochlear implants is rehabilitation and patient selection. Of course surgery is very important, but it's not the main point of cochlear implants.

GK: So how would you lead it? What are pros and cons of being autocratic or democratic?

S2: So…what's in between!? Yes, I mean autocratic is having one – the chief, the chairman, whatever and democratic is all at the same level… I think you have to have teams: the surgical team, the rehab team, the marketing team, the economic team and maybe you ned someone above all of them. I would try to have an overall view of the promise…not just the surgeon, not just the rehabilitation and of course I think utopia just doesn't exist and – because we surgeons want everything – so someone must be there. So it's kind of an autocratic democratic system

GK: A major part in leading is making decisions. In innovations as well. And what we're having here is a radical innovation. So..

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

S2: Ok this is what I was trying to say before. I think decisions should be… I mean the ideas should be decided [my guess is he means discussed] on the team but decisions should be taken by one person. I think the ideal system is the one … democracy where everyone can give their opinion, but there must be someone with the…a clear mind of the view, a clear mind of the situation … and decide among all this. So this is why I said it was an autocratic democratic. So the first question on the team orientation in decision making situation: decision making is by the team and taking the decision is….let's discuss what can we do: we can do single sided deafness ---advantages-disadvantages, what can we do.

GK: So here is food for thought: Henry Ford said if I had asked the people what they need more for their horse wagons, they would have said: ten more horses

S2: Laughs… These decisions must be brought up by the team, but someone must see, well, yes, let's do this. This someone must be a real leader. This must be someone who is recognised, who has the objective, has really fixed all the goals. So this is the person to taking decisions. Actually it's the way I work. I don't go and say: We are going to do this. I go and say: what do you think about this? Sometimes you see there are so many different opinions that you may get new information and stop. In others you may say: even if you think so, I am not gonna put ten more horses- I am jut gonna change the concept

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

S2: Well one of my first sentences is that: The human being is reluctant to the change. Everytime you want to change something, there is an opposition; even if you are going to improve them by far. There is an opposition: "we are happy with what we are doing. We are used to, maybe not happy, but used to"; and just thinking about different things creates resistance. And how do you manage this?

GK: Can these tensions be overcome?

S2: yes, of course. It is always overcoming. But one thing is the resistance to change and the other is the frictions. Frictions in my experience are much more difficult to solve. The only way I see to solve frictions is separating the friction point. Making people thinking about different things: if you have the topic and they don't behave well, then offer something good to one of them and try to make them thinking of best things of other situations. This is for frictions. And for resistance to change, this is where you have to be maybe autocratic. You must say, well this is going to be done. So try to be as […not understandable…] as you can. And I am sure, always, if it's a good decision –

but even for bad decisions – they get used to the new situation and the become again resistant to a new change

UNIVERSITY OF LIVERPOOL

Transcript Semi-structured Interview

Surgeon 3

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

S3: So offering one needs under one roof meaning hearing implants?
GK: Yes that's correct
S3: ...and not offering hearing aids
GK: the question is about being a corporation and now treating patients ourselves
S3: I think as long as the patients understand that the company / the clinic is owned by MED-El and going to their clinic their only option there is to get a MED-EL clinic. I don't think there's a dilemma there. I think the other companies are free to open up their own clinic and offer their own implant. Like in our situation, in a public hospital of course we should offer all the

implants to the patients. But in a private setting here in Canada, I don't think it is immoral to do that.

GK Is it morally different if we as a corporation do it compared if a private practitioner opens his or her own clinic?

S3: No I think there's examples here in Canada of Laser clinics; of Laser eye surgery. And they are private. And each laser clinic has their own clinic has their own clinic and has their own equipment. So there's a precedence for that.

GK: Again: Is there a difference if we as a company open a clinic compared to a private doctor opening a clinic? Morally?

S3: There may be. I think there might be. I think if someone could make an argument for that, but I don't personally see the difference.

GK: Ok Character plays a major role in morale, so

2. Is there a certain kind of character of the involved persons necessary?

GK: [explains] ..my team and the team in MED-EL and the local team…

S3: Ahhmm, I think in any such clinic there is a certain kind of character that's necessary. I mean the character of the people should be, having integrity… I don't know if it's different than to working in any medical clinic.

3. What or who could regulate the 'right kind of' character of the involved persons?

S3: That's a good question. Well for the clinic that I work it is somehow regulated by the college of physicians and surgeons in Ontario.

GK: So there is a board…

S3: Yes, I mean, they don't regulate our character, but they regulate the clinic to make sure that everything is up to standard. But there's no, like of, boss who reviews of performance. So I suppose that's the company, that's you and MED-EL that are regulating the people that are working in the hearlife clinic in Toronto.

GK: How could certain characters maybe be prevented?

S3: I guess that would something up to your hiring practice.

GK: OK, the next question is about something you already have mentioned before…

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

S3: I don't think you could have uniform ethical measures in different clinics around the world. Because the cultures are different. The norms are different. Like for example the clinic in Dubai has a waiting room that has separate section for man and a separate section for women. So…that's the first thing that comes to my mind. I think…[break]
GK: So, is it only minor differences that you see, or major differences
S3: Well I think the cultures have major differences. So you have to adapt, what it takes to adapt to account to different viewpoints and different cultures.
GK: there is a common measure in the medical world, which is the Hippocratic world…

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

S3: I think you can still run a private company and still obey the Hippocratic Oath. In Canada all our healthcare is publicly funded. So this venture in Toronto is really outside of the norm. Unlike in almost any other country in the world, where There's a public and a private system. Here we don't have typically a private system. But I think in most countries that have private healthcare they still can be obeyed by the ethics of Hippocrates and provide, you know, good healthcare without …[…]
GK: You would not find it an issue or conflict?
S3: No. No

6. What are the potential risks and benefits for patients?

S3: The risk is the financial risk. But as long as the clinic is properly set up, I don't think the risk should not be any different than the risk in a hospital.
GK: Are there benefits as well?

S3: The benefit is that they have an option to purchase a cochlear implant which they wouldn't be otherwise able to get for their single sided deafness or their bilateral hearing loss.

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

GK: [...explains…what stakeholders are]
S3: I have to give that some thought. Ahhm. Well there's the company itself. There is obviously the patient; and everybody in between… So, there's the clinic in which we are performing the implants. There is me the surgeon. There's the regulators, which would be the college of physicians and surgeons. I think, everybody that has been involved in the setup of the clinic, in the development of the clinic. I guess there's the legal team,
GK: when we stick a bit to that topic…

8. What are your specific thoughts on competition of the venture? How would you compete?

S3: The other cochlear companies. The implant companies would be your competitors.
GK: and if you would go to Dubai for example and open a clinic… who would be a competitor, you would think?
S3: I think there's a clinic there that cochlear [inc] has. I guess you are competing for healthcare dollars, so you are competing with all the other private clinics that are there; cosmetic surgery clinics and what have we..
GK: ...and how would you compete?
S3: by providing the best product and the best service. That is how I would compete
GK: Would you compete on price?
S3: Well I think obviously that factors in, yes.
GK.: Mainly or not mainly
S3: I think product and service are number one; but I think people are willing to pay a higher price, if the product and the service is excellent.

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

GK: …[…explains..]

S3: you know, I thought about that before, and I thought I probably wouldn't be very good at it… I am not a business person, right…

GK: ..but you would have a thought on it..

S3: Yes, but […off the records…] [….doesn't feel able to answer the question…]

GK: ...then we leave this…

10. You know our corporate culture well. How would <u>you</u> lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: […roughly explains leadership models…]

S3: I think all of the above. Really! I think it depends of who you are and where you're doing it and what the environment is like there.

GK: what would then be the pros and cons of being everything everywhere?

S3: What do you mean?

GK: If I would be autocratic as well as democratic I would be hardly predictable for my people … That would be a disadvantage….maybe it could be an advantage as well…Trump is unpredictable…

S3: Yes, I was just gonna bring that up. I think you have to charismatic as well. And I think you have to be a good person that's likeable; and that people can trust. I think trust is most important.

GK: when it comes to leadership, decision making is an important part; especially in innovational processes. This is an innovational project.

[1] At this point a short oral description on different leadership styles is provided to the participants

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

S3: Oh well, I am all about team and I think team's input is critical. The leader can't make decisions, because ….unless they know what is going on down below in the […not understandable…]. So I think it is important to meet regularly as a team to get feedback, so the leader knows… So you're the leader of the clinics…[…] so you have to meet regularly with the individual clinics. You can't just make a decision from the top, saying this is what we're going to do in all the hearlife clinics. They all function differently.

GK: Last question… this is about tensions

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

S3: By having an open place where those feelings can be aired and where tensions can be diffused by open discussion. I think that's critical. You have to have an environment...if people have a strong feeling where the company is going … discuss that; and talk to the people above them.

GK: Is it the same for inertia?

S3: Yes. Absolute. I think so. Yes.

GK: So you think this tension of harmony seeking on one hand and trying to be radically innovative can be overcome and bridged?

S3: I think it can be. Yes.

GK: thank you

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Transcript Semi-structured Interview

Surgeon 4

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

S4: If you consider healthcare being a commodity…and in many aspects healthcare is a commodity…then you need to look on how other corporations deal with their own commodities. Starbucks has their own storefronts, sells their own coffee – they don't sell competitors coffee .. Apple has stores. And the quisp [..not understandable…] with Apple and Starbucks are selling other vendors.. but do not sell other vendor's coffee or other vendors electronics. So from my point of view it is a very similar concept.
GK: is patient health a commodity?
S4: Healthcare is a commodity. If we are talking about patient wellbeing…no more different than a person's wellbeing with an iPhone or with a cup of

coffee in the morning…Now: Is health viewed very differently? Is it viewed more than a social good? Yes!
Ann healthcare has some unique features. But the corporation in question has two obligations: 1) it has to produce something that is of value to those receivers. 2) the corporation, to a certain degree has to make that available. And in the case of his corporation it is particularly unique problem. If it doesn't do something like Starbucks or Apple or another brand with storefront, then there is a good chance the good they're bring to patients will not being achieved. Is there a motive of profitability? Yes! You have to pay the lights, you have to pay employees, you have to pay for the products, you have to pay, you have to pay… And to have a company that is able to provide a service, cover its cost and reinvest….So long as a company is being well managed and investing wisely…then that corporation has met its ethical and moral obligations.

2. Is there a certain kind of character of the involved persons necessary?

S4: You can't be an asshole...not sarcastic… You have to be willing to engage in this process as a partnership, not as a winner takes all.
GK: is it different to a situation, where a private practitioner opens a clinic?
S4: Yes and no. Probably the reason that it is different would have to do with scale. I think where it's not different is: That practitioner has to rely on other practitioners. Not just to send the patients to them. But they are going to discover health issues that are not within their expertise and they need to rely on those other providers to care for. If they are constantly bringing those other providers into disadvantage economically: 1) they might lose those providers. 2) they will find these providers unwilling to provide the care, when that care is needed that individuals and patients. So there's a real requirement for a much more collaborative approach towards colleagues versus a more aggressive winner takes all approach. There's a concept called the tragedy of the commons: If you have someone trying to take it all, so end up with basically people having nothing. And one of the risks in healthcare is you …is called the tragedy of the anti-commons…one of the things you also want to avoid in healthcare.

GK: And when it comes to the character that is necessary for such a venture…

3. What or who could regulate the 'right kind of' character of the involved persons?

S4: You have potential for both external and internal regulation. External regulations are regulations by government or our community. Say this is right or proper. This is how things will be conducted. You have contracts in place that will be enforced. You have the rights of employees, the rights of corporations, the rights of customers. So that's your external to enforce your framework. But you also have…

GK:… towards character?

S4: Yes, this is behaviour that is acceptable. You often define behaviour that is unacceptable. The internal is obviously making sure that the external requirements are met. But the internal also has to come to the point of view of seeing what combination of individuals are going to be sufficiently diversed to group think, are sufficiently diversed to argue passionately for their ideas, at the same time willing to accept graciously if they succeed in getting their idea across… because in the future their idea might not be the hottest one.

GK: And who could regulate that?

S4: that's the internal

GK: But who?

S4: Good corporations do it on all levels. But you set the sea suite [...?...] ..they do it on the mid-level, thy do it on the deck plate…as the term they use in the navy.. So that's not something you do on one level. That's something that has to be done throughout the entire corporation.

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

GK: [explains]

S4: Well in some places you may not be able to …that goes back to the external. There may be certain behaviours, even if performed outside the boundaries of the state or the sovereign, that if that company engages and

even a foreign sovereign, will be unacceptable…That's the end of that. So there are times when, because of external, there may be a need to say: "we can't do business in this area". The internal in many respects should be a higher threshold. And they have to be looking at it: 1) Is this a country that is going to have a sufficiently stable society…that when a changing of governments, they're not shooting each other and we're not having to pull our people out. The internal you also have to examine: Are you pulling individuals in an uncomfortable position with their own ethics. If you gave somebody who is finding it very difficult to do business or to engage with counterparts in the country, who had maybe expectations that are seen inappropriate.

GK: Would you adapt ethical measures? Or would you have the same across…

S4: Ehical measures I would try very very hard to have the same ethical measures across the borders.

GK: would you find them difficulties rather minor or major?

S4: I would probably find it rather major headache, because ethics are questions of 'should-not' and therefore it wouldn't be an easy process.

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

GK: […explains…]

S4: I would argue: be careful with the Hippocratic Oath, because it's relatively sexist and is in many aspects exceedingly outdated…with the exception of the fact that is: 'first do no harm' . So I focus on this first sentences, I won't focus on 'don't teach your daughters' or ' don't tell the patient the truth' or all that, because if you look at those …

The reality is that: What's harm? Because: not providing a service may be a harm. Not having the service that is able to be economically sustainable may be a harm. Because a vital service that is not able to maintain itself will be lost…and hence the benefit with that.

GK: so is there a conflict of interest?

S4: There can be conflicts of interest, if the profitability or the margin or some other factor is placed at being preeminent over 'first do no harm'. If the

decision is made to cut quality or to take risk of devices that may have a small risk of failure. That could be a huge issue.

GK: Can it be overcome?

S4: You would hope so, but I am realist and sometimes the conflict cannot be overcome

6. What are the potential risks and benefits for patients?

[…left out….]

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

GK: [...explains…]

S4: The most important stakeholders are the people who purchase my product. They are the ones that are making everything else possible.

GK: that is?

S4: Whatever service or product I am providing, they are the ones that are making it possible, because if they're not buying…

GK: but who are these persons?

S4: If we are talking about implants, then very clearly it can be the individual receiving the implant, it can be the family, it can be the community, and it can sometimes going beyond that…the region, the country. But with something like an implant: The implant has such a powerful downstream impact that's beneficial…You take a person who is a tax-dependent and will turn him to a tax payer. So there's a significant benefit in terms of society and to the community.

GK: So who else would be stakeholders then?

S4: The individuals themselves, because now they can more fully engage with their family, their friends and their community.

GK: when you think of the situation here […in a country, where we have a clinic), who do you think is affected?

S4: Unfortunately I think here, everybody is affected. From that same chain I have just mentioned. Every individual is affected. We have an individual

implanted a few years ago, well that's very obvious. But you also have the family who has to either support the individual or not… or you have the circumstance where that individual has to find their own means. So have the direct individual impact, but you turn that person into somebody who can engage and work and produce income. Then you have somebody who can now starting contributing both indirectly and directly to the wellbeing and the welfare of the social community.

GK: Ok, one part of the stakeholders are competitors…

8. What are your specific thoughts on competition of the venture? How would you compete?

S4: I am not sure whether I consider competitors stakeholders! But I'll answer the question

GK: …I would, on the other side…

S4: That's fine and that's probably a discussion for another time. Your competitors …. I generally fairly worry about competitors. The reason I am worried about competitors…when things get hot, there is the tendency for the behaviour to come questionable…to be unwilling to honestly access the own activities, independent of what the competitor is doing.

GK: So who would you consider being the competitors?

S4: For cochlear implants you knowingly have the other implant manufacturers. But you have apathy as a competitor. But you have the subset of individuals who view cochlear implantations called […] genocide. You have the payers, who do not want to pay for the services , because they won't get the benefit.

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

GK: […explains…]

S4: Well I think if understand your question, my thoughts would be to separate the clinics from the manufacturer. I think I would be tempted to have a very very very lean reporting mechanisms. I would try to reduce the number of

reports to me and the deck plate as much as humanly possible. I think I would try to make the units independent as possible…for the simple concern that you could end up with issues where the manufacturer is upset that the clinics are not pushing more product. You could end up with the clinics being upset that they're being asked to do things that are not being in the best interest of the clinics. So you'd have to be exceedingly strict that this unit is not competing with that unit. This unit is not to support the other unit.

10. You know our corporate culture well. How would <u>you</u> lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: […explains…]

S4: When I was flying off with aircraft carriers it was aviate-navigate-communicate. It may sound simple: the most important thing you're doing with flying is..flying, and the navigating and communicating are important, but they're not nearly as important than making sure than making sure that the airplane stays in the air.

GK: How does that then translate?

S4: I translates […] that I would make it very clear that the most important thing, if you running the clinics, is the quality of care for patients. In terms of how I would manage it, sorry how I would lead it: I'd try to keep my mouth shut. I'd try very hard not to let people to tell me to what I want to hear. I much prefer to be told bad news than good news, because good news doesn't help me. If you're not getting bad news, something seriously is going wrong:

GK: Is that then rather autocratic or democratic?

S4: It's actually neither...it's a combination of both, because ultimately you have to make the autocratic decision what to do. But you also have to be willing to listen.

GK: does that differ from the daily business compared to building something new – being innovative

[1] At this point a short oral description on different leadership styles is provided to the participants

S4: Well, building something new, you are usually one on one. If you are doing something within a small organisation, you usually have the ability to me much more democratic than autocratic, because you have a small core of folks that you generally know very well; and whom you trust very well. But when you get into larger and larger and larger organisations, where you have less ability to be able to really carefully follow….if you start to be more and more democratic you run the risk of people doing things really should not be done

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

S4: well actually I am of the mindset that if you're picking the right people you'd devolve the decision making to the lowest possible level.
GK: Who makes the important decisions?
S4: Well define what you mean by important! […] I am trained by the navy. So I was deployed in the middle of the desert […] I was making all the important decisions. So if an admiral, somewhere down the crew chain above me, making the important decisions
GK: …and there are important decisions…?!
S4: Oh yes, in terms of what supply you need, what equipment you need; those decisions that should be made at the [individual level] and not at the level of the admiral. Well the admiral might say, the fleet is going to this direction , but the boats are going to figuring out how are we getting to that direction. The admirals might not tell him how to do it. So you try to fall that decisions at the lowest possible level. Sometimes […] a great deal of defining of what those jobs are…and what your responsibilities are: What you don't want to have are people given far more responsibility than their authority.

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions,

inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

GK: […explains…]

S4: I don't think you manage them, I think you accept them. I think yu accept the dichotomy, the paradox of these two tensions. I think you have to be willing to accept that you cannot bring these into agreement. My bias has always been to accept contradictions. Because trying to bring them under a common umbrella…usually you end up destroying qualities and benefits. It's that turmoil that point of friction that you generally have in the innovation occurring. When you have people saying: no you should do it and people saying: yes you should do it…That's when you have the greatest level of thought process, thinking of challenging and finding ideas.

GK: With people in corporations, such change regularly causes inertia …even though it's known that friction might be healthy. How would you overcome such inertia or resistance?...or manage it or handle it…?

S4: The way I have learned to manage it is: nobody keeps their job. I don't mean that they get fired, but when somebody is comfortable with their job, I have found that's a problem. What I mean by that is …they finally know how this works….and that's going to be a problem. When things change, they're going to be unwilling to grasp on the change, because what they're doing…So my bias is to have a deliberate plan with personnel, to say:: ok you work x. months/years whatever in this position…and I don't want to sound harsh, but if you see …the reality is your culture will become stall, if the same people hold the same roles – including the CEO – without some sort of refreshment:

GK: So can this tension be overcome?

S4: No, we have to accept it

Transcript Semi-structured Interview

Surgeon 5

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

S5: I think there is a real danger that this venture could be criticized or open to abuse…and certainly criticism that it is company centred and not patient centred. However, if very clear and strict rules and standard operating procedures are put in force, I have no problem with it. If it's patient centred and have a very strict governance set up then for patients it's just another offerer of care. The patient would have the choice.
GK: Is it different, from a moral perspective, if we as a corporation open such a venture compared to a private practitioner opening his or her practice?
S5: I think you are more open to criticism. But that doesn't mean that this is inherently wrong. It depends very much on the actions of the company and

the safeguards put in place. For example whether you have an external independent auditor of your practice. If you had an external independent auditor of your practice, that will show your practice would adhere to current international best practice, then I think that would be entirely reasonable.

2. Is there a certain kind of character of the involved persons necessary?

S5: I think they have to have a very clear moral and ethical stance in a venture like this. And they must be the sort of persons that can work to a well-defined code of practice. An individual does not work well in a structured way is not going to be a sort of person for such a venture.

3. What or who could regulate the 'right kind of' character of the involved persons?

S5: I think in all of this you need some….What you need to do in my opinion, when the person's stance is this is all about the company and not about the patients you need to say: Well all aspects of the practice have been independently and externally verified and assessed. Firstly it would be entirely reasonable for MED-EL to select those people that are appropriate. That decision should then be verified by an independent body.

GK: OK, who does regulate you as a private practitioner?

S5: The GMC

GK: Could something like that apply to us as well?

S5:

If you had a body with the same authority as the GMC – cause after all the GMC has the authority to remove a surgeon's practising privileges – prevent them from operating. So that is very… that is a very, you know, authorative and powerful body. So you need to have somebody really – or a body or at the same level of that body.

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

GK: [explains]

S5: I would think that would be very, potentially, reasonably straight forward, if you use a body such as HEARRING. So that the work we have done at previous HEARRING or things we have been looking at, for example candidacy criteria – because that's the fundamental of it. One of the things that we will show later in the year is that variance in practice. But if you're then able to agree with – from example from HEARRING – criteria, then you would use those in your clinic. So I don't think that is insurmountable at all.
GK: Would you adapt ethical norms?
S5: No I think it would be more...the ethical norms would be the same in terms of the fundamental of 'do no harm', place the patient first. Those sort of fundamentals for healthcare would be applied to a venture like this. I think what you would need to do is very clear, based on candidacy criteria. So that you couldn't be criticized for implanting a patient for example with a cochlear implant who in the majority of the […not understandable…] world would not be considered a candidate.

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

S5: To a certain extent, if you look around the world – ahhmm the Hippocratic Oath and profit – If you work in health system like the NHS, then of course you have no monetary gain. But most clinicians undertaking cochlear implants work, also have a significant part of their practice which is private – that generates income directly for themselves. Now, providing those individuals apply the same standards, then I have no fundamental problem with it. Again, with this body here: providing the standards are clear, are published and they have been audited and agreed…and provided you audit your practice against those agreed standards then I have no fundamental problem with it.
GK: So there is no conflict then?
S5: No, I don't believe there is

6. What are the potential risks and benefits for patients?

S5: The potential risk to the patient is that they are not being managed to best evidence based practice. That is the fundamental risk of a venture like this.

But providing that sort of measures and safeguards are put in place that is not something that would stop you from doing it.

GK: are there benefits as well?

S5: Within advanced healthcare systems the benefits may be small since patients have already access to cochlear implantation. However in some countries that is not the case and in some countries they don't have the governance structures for surgical practice. So you actually have the potential for benefit to patients who: 1) wouldn't have access to the intervention and 2) might live in a country where they would not been managed according to best practice. So it might be beneficial in terms of standards of care they receive.

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

GK: [...explains…]

S5: well stakeholders would be the patients, the clinicians involved in the care of the patients, the company, and whatever it could be governance body that you have in place to manage that process.

8. What are your specific thoughts on competition of the venture? How would you compete?

S5: Fundamentally, I think, if you are open about and publish your standards and operating procedures and so it is absolutely and completely clear to all competitors to what standards and criteria you use, then again, I see no issue.

GK: Who are the competitors then?

S5: The competitors for you would be twofold: Other cochlear implant or auditory implant manufacturers and the second would be other healthcare providers.

GK: how would you compete? On price?

S5: You have the potential to compete on price but you also have the potential to compete on the quality of care and the standard of care you're delivering. Coming back to what I've said: You would need to reassure parents and patients that they are being managed against strict criteria . The

reality of the situation is, that - for example within the UK- there are NICE guidelines- but that guidelines are applied subtly different in different centres. And although commissioning bodies have the right to audit practice – And I believe that have occurred to some centres in the UK…. Actually the strength of this venture could be, that you say: look we stricter auditing that actually exist in existing healthcare.

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

GK: […explains…]

S5: I think it has to be semi-autonomous from MED-EL, as much as these individuals that are involved in this practice would have line-managers and your CEO, but there shouldn't be any influence by a way that other departments within MED-EL interfere…because what they would be doing is …Med-EL would have the products and they would be taking the products from MED-EL and use them within the clinics. You also have the potential to consider research within this clinic environment. But you would have to have really strong research ethical standards and a way to govern –research governance structure.

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: […explains…]

S5: I think you would have to have a very strong group of people that are running …would have the responsibility on running these clinics. There would definitely need to be clinician's involvement on that. And again those people would have a responsibility to report back to MED-EL as their relative company. But also would have the responsibility to interact with whatever

[1] At this point a short oral description on different leadership styles is provided to the participants

audit you would have in place to govern the clinics. You have the potential with HEARRING, not necessary with using the whole of the HEARRING meetings or –group – but you have the most senior clinicians in Europe.
GK: And how would you lead it? What style would you apply?
S5: I would have a very open and democratic approach to the leadership. The thing that would be absolutely crucial in all aspects of this venture, would be that you are entirely open, honest with the patients and …and all aspects that you do would be regularly published. So all of your standards, all of your criteria – everything would be agreed, first within this venture, you could then have t agreed with an independent body and then publish everything. So I would be open and democratic. Authoritarian leadership style would not lend you to this venture.

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

S5: I think in a venture like this, I think you should have a core group of 4-5 people that are responsible for the day to day running of this. They would obviously interface with the CEO of MED-EL, but clearly they would be responsible for those day to day decisions. And they would be made democratically.

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

GK: […explains…]
S5: well actually I don't think that is insurmountable. I think we would start this project of with making absolutely clear to MED-EL [..and it's people…] that fundamentally you would hope this venture would improve patient care….and

would improve access to cochlear implants for patients that may otherwise not see either the best advice or the best care. So ultimately MED-EL as a company absolutely fundamentally would place the patient first. That's how I would this is our venture. Of course you are a commercial company, you all know that. Place the patient first, then I would say this another way that MED-EL is attempting to ensure that maximum of patients benefit from cochlear implantation around the world. And I think whether you are an innovator or a harmonizer – ultimately, if you work for MED-EL that is a fundamental of your work

GK: Thank you

UNIVERSITY OF LIVERPOOL

Transcript Semi-structured Interview

Manager 1

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

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1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

M1: Ok, when I first heard about them I was a bit unsure. Mostly, because where I come from it wasn't allowed. Legally. So you could not mix a business with healthcare or whatever. Ehmm, then I though oh would this really work. But I think I have changed my mind. I think I have seen businesses change their mind, because you have this kind of thing with hearing aids are sold not only through distributors or so, but also through pharmacies and often one pharmacy might choose one brand. So I don't have an issue with that, because what we want are the best outcomes for our patients, specifically from a MED-EL perspective. And you know it is very clear: We are the business "MED-EL" and we only sell MED-EL

GK: Yes

M1: …and that's what we offer, because there's no saying "you should use this vs that" because we're not dealing with different products or competitors or whatever. And I think that provides a bit of service. And I don't have too much of a problem with that.

GK: alright, then I come to the second question. When it comes to persons who are responsible for such a thing we have done.

2. Is there a certain kind of character of the involved persons necessary?

M1: Hmm. That's quite an interesting question. I think this person should have some kind of humanitarian nature, and to see such a facility as a service not as a big sales thing. So from the organisational point of view I would hope that that people don't get bonuses or things like that, because I think that might push them over to some kind of unethical [behaviour); particularly if you had this care team, doing this information for potential candidates [for hearing implantation]- then you have to be a bit careful about the undue influence you might have versus if someone already got a MED-EL implant – then you give them good service.

GK: Coming then to the next question

3. What or who could regulate the 'right kind of' character of the involved persons?

M1: Mahh [laughs]…Life is regulation. Life is lots of regulations. I think…I come from a research perspective and with that we are bound like with an Ethics committee. And there's always a board looking into it. So maybe there should be…So I am assuming, if we plan to hire someone into that. More than oe person should say this character is good or trained. So maybe a board rather than a fixed regulation – because how would you write that down?

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

M1: What ethical measures are you following to adapt? I don't know, because I have to work under a certain rule of ethical measures and those have to be

applied wherever I have to work within. There is no scope. Even though you know that different cultures see things a bit differently.
GK: Would you adapt it to local?
M1: I think I would try and consider that, otherwise you would get nowhere.
GK: OK, one of these ethical norms would be the Hippocratic Oath, so..

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

GK: …Hippocratic Oath meaning like doing no harm under any circumstances
M1: I know, I had to sign it…many many years ago. I think if we run the care centres, for example, in a way that isn't profit making organistion…you gonna make money to cover the costs and provide services things like that. Then I don't see that there's a conflict, but again if I'm using this to try and get more patients in because I get more money then I think there is potentially this conflict of interest, because we may offering that may not the best there is or the right thing for this individual. And then I think you lose the sense of the individual and the person you're supporting.
GK: Does that differ to an ordinary practitioner?
M1: No….Maybe in a clinic it's a bit different, but if you're in private practice you could have the same thing. You know if you're getting handouts or nice little luxuries from a company. It's the same idea…it's a bonus in a way.

6. What are the potential risks and benefits for patients?

GK: ..in a venture like ours
M1: So I think what they get is experienced personnel; experienced in our products, particularly with fitting. I've seen it in research. If a clinic is more experienced with another company's products and software, they might try and use their approach with our software…and that doesn't work. You don't get the best results. I think [patients get] knowledge that's available. Patients might come in and you say this process is better for you…or did you know there's longer cables…so he wouldn't have this cable problems. So I think there's that kind of knowledge. I think in some way a company also invests in

a care centre or something like this. So you should be assured modern technologies, modern products and also trained people.

GK: What are risks? Are there risks?

M1: There are risks depending on what the centre does with these patients.So do they do research without them knowing? Aahhm, are the ycollecting information…if I am a patient, am I reassured that whatever information they get there is within a data protection. Would I be sure that if I fit there and if I go to my clinic they don't say it's bad or they lose a fitting. I know there are systems in this software that you can pick up a map anyway, but, you know, what happens if there comes a conflict between the clinic [and us]…and the rehab centres and the care thing and then you kind of land stuck in the middle. Because the benefit to come to a care centre [us] might be you get a quicker appointment or you might have stock or whatever. And then, if there's this conflict between that clinic and the centre then where'd you go next time you have a problem. So, you know, there might be personality risks. The [customer] clinic might have a damaged ego: "Why didn't you come to me. I am your audiologist or your engineer.

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

M1: Ok I think we have….stakeholders are our surgeons, unless I hire my own surgeon and have my own [surgical] theatre then it would also be audiologists, paediatricians, doctors for the elderly (geriatricians); so this kind of things. You also have to be working with user group. I think they have a big say and involvement and they could make a break to the venture. But the stakeholders I mentioned first are also competing in some way. Maybe it's not such a competition if it's like in a government reimbursed system...and they're overworked and they can see your value. But not everywhere is like. Also many places are private, so you would take money from theim

GK: That leads me to the next question:

8. What are your specific thoughts on competition of the venture? How would you compete?

M1: Hmm.. It's a hard one. Because this is not the thing I do…It's not my personality to sell. But I think you gonna have to sell. You have to sell your service. And how would I compete? I think service sells a lot. And I have seen that from working on the other side, when I was still working in South Africa: You know-which hearing aid company did we choose? Ok, and you would sometimes not necessarily always choose the best with all the sparkles and dangles or whatever. You choose someone who is gonna give you a good service; very important because they don't wanna be without hearing for any period of time. So if the dangly spangly can only sort things out in a month and someone else can do it in two days…so that's how I would…that's because I am not a sales person.

GK: Ok…

M1: I am not putting flyers on your car….

GK: Let's turn to the inside

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

M1: Ok, I think, maybe it goes back to the question of character. I would definitely have a board. And I think, maybe that board should have guidelines or an SOP about how it manages itself so that everything is above board.

GK: Who is on that board?

M1: Ehhm… If I look on how we do in-house testing here - and we have a board…and that board is someone from clinical, someone from R&D, someone from regulatory, someone from quality… so maybe people from different aspects. Maybe here I might add someone form awareness or someone non-technical. Maybe you even need to have a volunteer

GK: Externals as well?

M1: In that way one volunteer, yeah. You know so if anyone would have to come and look and inspect, like everything gets financially audited, it's a good way in saying things are over and above; positive or negative? I think there's

always this thing- does this group make money? Why are we supporting this group? Cause things take time- I think you know that [laughs] for success to come:

GK: That means also, you would separate it as an extra group?

M1: I think I would, because…isn't that sort of a wise business decision…in a way.

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: you are familiar with leadership styles

M1: Yeah

GK: and the question comes because maybe in an OR leadership might be different to an awareness department. SO how would you lead it?

M1: Isn't it like benevolent autocracy? [laughs]. I think democracy is a big word and I think you have to have some opinions. But I think you might lose the fact that someone needs to take control. And someone still has to make ultimate decisions that are good for the venture; but also good for the people who are hired into that venture and also good for the people who would use that venture. So I don't believe into dictatorship or something like that because then nothing is ever going to work, because you impose absolutely your ideas and you are going have to look what the needs in each area are. You know some places might need to have more emphasis on rehab, because there just isn't rehab around and about. Other places don't have audiologists or engineers, like Japan for example; so then we need to put our trained engineers and offer more of that. Some places might not have experienced surgeons, so we might need to have a hiring-in or contracting kind of system. But I think in the end you need a head and probably a board.

GK: this leadership question leads to a decision question

[1] At this point a short oral description on different leadership styles is provided to the participants

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

M1: I believe a lit I teamwork, but if you are a clever leader – dare I say [laughs] – you know how to –it's a strong word – manipulate…you know you can …influence things a little bit. I think sometimes you do need someone…maybe there could be a voting system, but there has to be a veto vote, otherwise you don't get somewhere. You know, maybe you would to put something: ok- we wanna open a clinic in Mongolia. Right. So we would look into all the costs and benefits and needs and whatever…. Do we? An then there should be a secret vote …I don't like hand raising, because I think people are unduly influenced by that. But if it is an equal there has to be the person you put into the lead and makes the ultimate decision. And they're chosen for that, as one of their skills.

GK: that leads me to the last question

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

M1: I think, in our corporation, even though we're privately owned… sometime we don't ha the person who makes the ultimate decision…and things can go on…and I think by letting things go on - I know some people like to do that as a leadership thing, because if you let it go on it goes away – but I think on the other hand if you leave things to carry on, it builds things more, because you have a lot of misinformation. So I think probably sometimes we might need someone who says yes or no and that everyone respects that. On the other hand I think we probably we need better communication. Because sometimes things are so secret and then it's all done and suddenly it's out there….and because people don't know about it they resent it. And I think if people are

more informed about of what the goals are and how we're doing it and how we're gonna support it until it's a success, people would fel more comfortable. And I think we miss that.

GK: Thank you

UNIVERSITY OF LIVERPOOL

Transcript Semi-structured Interview

Manager 2

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

M2: So, I think having established these clinics is a good thing because by that you can also provide the necessary care and treatment to a certain group of people who wouldn't necessarily get his treatment. And obviously there is the link, you know, the corporation and the ethical aspect of that, but if the company would not have established these kind of clinics in these kind of locations for example then certain parts of the population, global population or country population might not have access to his kind of technology or this kind of treatment; and by that they would be worse off than they would be now.
GK: so from the moral perspective would you rate it more positive ore more dangerous?

M2: Ahhm, maybe it comes back on a more later question? But I would rate it more positive but obviously there are some things which would need to be take into account
GK: This leads me to te second question, which is about the character of the involved persons:

2. Is there a certain kind of character of the involved persons necessary?

M2: Like with certain traits or skills within the character?
GK: Character – Morale of a person…
M2: Ohh… I think that's a difficult question…Well, obviously you have this old concept of do no harm and obviously that is something which should be there. I tend to believe this should be principally there in every person. Do no harm. Aahm, I mean, I think it's really hard to define a certain character or a certain trait in a person, which would then by definition lead to the fact that this person would do it ethically or morally well, or this person or another certain person with another certain character or traits would not do it ethically or morally well. And even if you continue the discussion: one might think that by just defining certain character traits in a certain person who would be more suitable or less suitable- one might question is that then morally correct to do that?..and you know, limited in that sense..

3. What or who could regulate the 'right kind of' character of the involved persons?

M2: What or who?. I think I don't like the who-part, I probably prefer the what-part. And what one might think of – you know – you could have a code of conduct. Let's say, you know, how to deal with patients and how to treat them. I think that's important and certain codes of conduct in that sense already exist, like in pharma industry, for example. I would prefer that. I mean, good question is who? Because obviously you would have a code of conduct and if somebody doesn't adhere or stick to it then, ok it needs to have a consequence there. But I mean definitely there should not be any regulatory body or an official body doing that.
GK: A board?

M2: A board, yes. A board would be a good solution.

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

M2: Ahhmmm….I would….if I would adapt ethical norms it would be in a very limited way and I would have to think more intensely, more deeply you know, how I would change. Because if one as a company setting up these clinics and the people engaged in the process of treating these people…ahhhm I wouldn't see how largely different they could be from an ethical perspective. I think it overall still says like, on one hand it's do no harm on the other hand you want to have the best possible solution for this person coming to your clinic and the best possible treatment. And that sense this might be in a highly developed market or it might be in an emerging market. But all in all for the staff working there or the staff running it, the concept would still be that obviously that you want to cure and treat a person. And obviously on a side note, maybe major side note, there might be the financial issues linked to that. But I think I see that partially as separate from the ethical discussion.

GK: THe fifth question continues in that direction.

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

M2: My personal belief is that the do-no-harm has priority over the profit-seeking concept. I mean, obviously I think, given that the company has set up these clinics, I mean, clearly, long-term there is a profit seeking concept behind it, but: it's not because of you seek profit that you should not stick to the rule of doing no harm. I think both can go together well.

GK: Is there a difference between our approach of setting up company owned clinics compared to a private practitioner?

M2: No, I think there is no difference to me. I think whether it's a private practitioner, whether it's a bigger group , even if you look at a state run hospital or governmental owned hospitals… I think all in all…I think what they to get is also… if it's a bigger organisation they also want to reach the break-even point and potentially also have some profits to invest, you know, later on,

in whatever equipment or capital expenditure, or goods and so. And if it's a private practitioner setting up his own clinic then obviously he or she has a very strong interest in the financial picture. And one might argue that, if you set it up from accompany there is still, you know, a potential peer to peer critical eye on things, so to speak through a board or whatever organisation. But if you have a private person setting it up, it's him or her judging, you know.
GK: Turning more towards the patients…

6. What are the potential risks and benefits for patients?

M2: Ahhmmm, I think the potential benefits are high, in a sense that patients get access to a certain kind of technology which would not necessarily be available in that country. They get access to….high level experts. And if it's not highly recognised experts, you know, there would also be local professionals who would then have been widely trained by us as a company. So in that sense the expertise level of the people treating the patients would go up. So you would have the technology advantage, and in that sense the treatment advantage and obviously as a company you would also take care that all side conditions are well taken care of.
GK: And risks?
M2: And then from a risk perspective: I think if you stick to the code of conduct, so to speak to a certain base of principles, which you need to define in advance, I would think that risks are very limited.

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

M2: If it would be my firm…So the affected stakeholders…It's obviously a multi stakeholder concept…so you would have local government, local healthcare organisations, whatever they are – in that sense health insurances for example; local professionals are obviously involved. I think that's probably the biggest ones. Well obviously they would be affected and indirectly also the patients would be affected. But on the bigger scale it's obviously the ones I have mentioned. Those would be included definitely.

8. What are your specific thoughts on competition of the venture? How would you compete?

M2: So obviously if you set up a clinic like that, you compete, you know quote on quote, with local clinics and local centres. And how would you compete? I would compete in sense, you know, that you would have different products or service offerings on one hand. So people might have access to certain devices, certain technologies, which they don't have in the other clinics for example. And I would also try to compete on a service level aspect, in a sense that try to make sure that the service you provide and the quality of service you provide is of the highest standard. And by that, you know, you position yourself amongst the top tier, you know, of the healthcare environment in that area.

GK: Price competition?

M2: Aahmm, if price competition would mean I would drastically go down with prices to attract more patients, then I would say like: no…I think like, you know, obviously you need to have like a competitive setting I think I would prefer to position it being indeed access to a certain kind of technology, highest quality standards, and service level you get. And obviously for that, you know, there is a certain price.

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

M2: Within the company…I mean, obviously if you set up something like that in a certain kind of area you compete with certain sales leaders in that area. They need to see…they need to understand why this clinic would be set up and what potential advantage is…to them. I think the local sales leaders need to understand why it's being set up there. I think in that sense it should almost be, if possible, complimentary to offering – in broader sense of the word – what they have. And I think what is also important is that – and that's then more talking about the central organisation – is obviously you start with some kind of business activity, which is not the core business of the company. So

obviously you would need to create partners in the company to set that up. And, ahhm… to have some kind of carrying force, you know, within the company, because if not you will be confronted with a lot of internal hurdles and internal obstructions against it. Because it is not core business and in that sense there also might be a need, you know, to educate in a certain way senior staff on how an what.

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: I ask this because for example in an OR the leadership style is completely different than in a very democratic environment…and here we are kind of in between…What do you consider being the right leadership style.

M2: It's a very difficult question. I mean knowing the company, and the philosophy and the personality of the company I would start probably from the fact that the company is highly research data driven, in a certain way, you know, very rationale in certain things. In other ways it's also not, but in certain ways rationale. And in that sense I would think that I would come up with a model that would demonstrate what are the pros and cons. So what are the pros, what is it bringing to the company. And then not just from a profitability kind of perspective but also, you know, by generating more lead potentially for other things; or generating a certain awareness for the company or the things we are producing... also building on certain things, like reputation.

GK: So that's leading towards company. How would you lead the personnel?

M2: The personnel…not too democratic…I mean, I think obviously somehow between autocratic and democratic, but then probably more towards autocratic than towards democratic, if I would have an access. In a sense, I think, you obviously want to move things forward and certain things can't be decided in a full democracy. Because you never get to a decision.

[1] At this point a short oral description on different leadership styles is provided to the participants

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

M2: I think the leadership makes the decision, but obviously on a well-informed basis. I think it's key you can...or should have discussions with a team, while the team could provide the leader with all necessary information, background, you know…so that the leader has all the elements to make a solid, firm and well informed decision – but he or she should then decide – and that's not democracy.

GK: Twelfth and last question

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

M2: Ohhh... [laughs]…you kept the most difficult question for the end, obviously. Ahhm..How it can be managed. It's a tough one. I think it's a really tough one. I think the harmony seeking concept of the company is true, but obviously it creates quite some bottlenecks, delays you know… yes, delay of decisions, and also delay in progress. So I would prefer to have it less in harmony in that sense. I am big believer in…it might be better…maybe not to take the perfect decision, you know, but to take a decision and to progress with the things you're working on. And then potentially, obviously over time you might need to adjust your decision; or you might need to adjust your strategy or philosophy. But I think that's important.

GK: So towards this venture of our own clinics you would kind of loosen harmony on the other hand to become more decisive?

M2: Yes, I think, even in this company I would do this.

GK: Ok, that's one point, but for the venture of setting up clinics…

M2: Yes, I mean I would go for a more decisive approach and lessen harmony, I think, overall. When talking to your stakeholders, you know – internal stakeholders then, when you provide them with all your elements and you try to take them along with you on the path you going, why you want to go into a certain direction and why you're taking decisions you are taking...I think that's key that people need to understand it, but on the end you need to decide on things and there's never complete harmony and there will never be a complete consensus on things

GK: Thank you

Transcript Semi-structured Interview

Manager 3

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

M3: I don't see a… I mean the ethical conflict would be, that the corporation M has the goal to make lots of sales and money and using the tool of having this clinics in increasing sales. In itself I don't see a problem, as long as a certain- to a certain degree – independence of the clinic [is given]. On the other hand it is, if you look at the different health systems, especially in Western countries…also with any private clinic… is often run as a company - you know- with revenue – and for example in Europe or Germany they want their clinics to be profitable. And in a lot of cases clinics ar doing those procedures that are profitable more often than they do others. So I don't think there is

actually such a specific situation with a manufacturer owning a clinic rather than another entity owning a clinic; because the goals are the same.
GK, This leads to the second question, which is turning to the involved people and their character…

2. Is there a certain kind of character of the involved persons necessary?

[…explaining the question…]
M3: I guess they would need the same characteristics or profile, if you like than anyone who runs a clinic. I think generally in MED-EL, we…I think we're quite a moral company
GK: What is defining that moral?
M3: I see with a lots of meetings, especially with our CEO and Senior Management, whatever, that we basically never talk about revenues, money ..anything like that. It's always about…the centre of the focus is always the user, the candidate or the patient, if you like; and how this patient/candidate/user can benefit. So I think we are very goal driven and not money driven. So this is the same I think also for the clinics. If this is the same kind of driving motivation, then I don't see an issue.
GK: Ok, when it comes to the character…

3. What or who could regulate the 'right kind of' character of the involved persons?

M3: That's a good question. [repeats it]. I don't know if there's generally a regulation of who runs a clinic?! Who organises a clinic and how they are regulated. I would assume that they are, you know, in any medical entity there is the Oath of Hippocrates that is guiding.
GK: But does that count for us Managers as well?
M3. Well that's the question…it doesn't.
GK: So who could regulate us? How?
M3. I don't know. I haven't though about this. It's a good question.
GK: if you say I don't know, it's ok, it doesn't matter. Could it be a board?
M3: …like implanting people who do not need an implant….yes, it could be a board, like an ethical board within the company, doing auditing. I guess some

kind of regulation would also be the public opinion, which today, I think, once you do things that are not ok…through social media and stuff like that it's probably something that goes around. I think it is something like market regulation – well that's not a real regulation.

GK Ok

M3: Yes I think something like an ethical board which would audit these clinics would probably something that is decent.

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

M3: I think generally, if it's an entity that is run by MED-EL, I think that it should be our values that should drive this entity. I could see that there is some adaptations. Adaptations could be necessary

GK: Minor or major?

M3: Minor. Just more maybe on a cultural level. I don't know, for example if you do that in Saudi Arabia that would need a strict division between male and female workers… you know, things like that, but this would be minor. I think generally, if we drive something it should be our values and that should basically be the same over the whole globe.

GK: Now we come back to something you have already mentioned…

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

M3: First, I wouldn't think there has to be a contradiction or a conflict. This is my foremost opinion. I don't think there needs to be a conflict.

GK: Would we differ from a private practitioner, who owns his practice himself or herself?

M3: No. No. I don't think so. And the thing is: making money, you know- everything you do you have to make o money and consider economics- let's say it that way.

GK: How about: Imagine a difficult case: A poor child is showing up, with no money… Is there then a difference whether you'd provide a cochlear

implant…for us being a good earning company, compared to a practitioner or ENT surgeon?

M3: Well in the ends this procedure needs to be paid for. I mean the money has to come from somewhere. And that is in any health system that denies or not deny treatment but there needs to be some kind of funding. Where the money comes from… you have to…the question is: do we feel morally …

GK: Is there a different kind of level for us to be moral compared to a private practitioner?

M3: I don't think so.

6. What are the potential risks and benefits for patients?

M3: Well the risk of course is that a company may be more money driven than a public hospital and that indications are stretched or people ar treated beyond their need. Again, this is probably true for any private… any local doctor is an entrepreneur to a certain degree. And any private clinic is a business, and with the health system changing in the last 10 to 15 years they also have to profitable, they are also kind of seen as businesses. So I don't see there is such a big difference if a company owns a hospital or someone else owns a hospital.

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

M3: It's probably the local health system, then other customers - professional customers, because one thing is if I establish my own clinic I may establish competition to my own customers. So this is something that needs to be taken care of. Other stakeholders of course are media, are self-help groups, are the candidates. I think internal sales structures need to be addressed, again for the same reason of going into competition

8. What are your specific thoughts on competition of the venture? How would you compete?

M3: To other clinics you mean. I think it would probably be a smart idea to establish such a clinic where I do serve an unmet need. So competing is probably somewhere where there is still lots of opportunity of growth. So competing would be, as I said with other clinics.
GK: would you compete on price?
M3: No. No. It's probably the smartest thing is really on the service side….and this would be the advantage… to have the full service out of one hand, basically.

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

M3: As I mentioned before I would probably do it quite independently and so that these clinics don't need to address – on the ethical side – sales goals, overall sales goals. Things like that.
GK: What positive or negative effects would it have?
M3: The negative sides of this thing would be, again, internal competition to other sales structures. And the positive thing would be , again, that there, you know, the clinic cannot be misused for, I don't know, ambitious sales goals , things like that. So in itself it would be an entity on its own. Of course with its own goals

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: I ask you that because in an OR leadership is maybe completely different compared to a Marketing department.
M3: hmm.. I think. leadership type is probably something very individual. I am usually a very strategy driven person. The question would be: how do the goals of the clinics coordinate with other goals of the company. And then what

[1] At this point a short oral description on different leadership styles is provided to the participants

is our goal with establishing these clinics. Of course there needs to be some kind of goals. Again I would see that there needs to be some kind of unmet need that can be fulfilled.
GK: let's break it down to your daily behaviour:
M3: I think on that level it's probably necessary to adapt; Since we do not have our own surgeons to a degree. And we have to adapt probably to some local cultural – situational style.

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

M3: I think I often tend usually to leadership decision, which is often in conflict to our company culture, which is very very democratic, which I don't always agree to. I think there should be input from the team, but in the end the leadership needs to make the decision; because they have to justify the decisions; they have the long term goals and strategies in their head – or they should have them; and especially when you say radical innovations I think so many new things come up that often…if you have too many people… the bigger picture often gets lost. And this is why I think it should be a leadership decision, but there should be input from the teams because I think it's not good, if there is no involvement at all of people who actually do the work. I think there should be input, but in the end I think there should be a leadership decision.

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

M3: As I mentioned, I am not always as harmony seeking as many others. I think sometimes it's necessary to have a… that's where the term leadership

comes from….that someone leads and goes forward. Sometime it's not possible that the whole crowd join you.

GK: Can this tension of being harmony seeking and being innovative be overcome or bridged.

M3: I think so.

GK: How?

M3: I think by going ahead, by being an example, by arguing. I don't think all should be involved in the decisions, but all should be somehow in the boat. And you have to take them with you. But it's not that…but you know not always any decision must involve anyone. Not anyone should be allowed to vet a decision, which often happens. I don't agree to that. I think this democratic culture that we often have is really slowing is down.

GK: But this discrepancy of seeking harmony and being innovative can be bridged?

M3: I think so.

GK: thank you

Transcript Semi-structured Interview

Manager 4

Dissertation: The Ethics in Radical Innovation:
Insights into the Hearing Implant Industry

"Dear Interview partner and research participant,
in this doctoral research I inquire into the interaction of ethics and strategy. What ethical issues arise where a manufacturer of hearing implants is also directly involved in the treatment of patients with hearing loss? Now that you have completed a questionnaire on your ethical position I'd like to ask you a few questions. The questions are open. Please feel free to add any comment that comes into your mind. The questions centre around your position and opinion about the interaction and interdependentness of ethics and business? What do you consider (have you experienced) are the organisational impacts to corporation M? Are there tensions or paradoxes – and if so, how can they be addressed?"

1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

M4: I think it is a very good innovation. Because it happens in areas of need. And given that we work for a very ethical and principled organisation I think it works, because there's an overlying belief of what we offer to our patients and talk to our patients about is based on ethics
GK: Is it moral if a manufacturer of medical devices treats patients itself, kind of doesn't give choice, for example?
M4: Obviously if they wouldn't provide choice within their own business, but I think, you probably need to let know people that there are alternatives that they could investigate. And certainly if your offering doesn't suit their offering, I

believe you should forward them to a better solution or something better suited.

GK: Would you see a contradiction between being a manufacturer and offering direct patient treatment, diagnostics and therapy?

M4: Not if it is the highest standard and if checks and balances are within the business.

GK leads to the next question. Moral is connected to character…

2. Is there a certain kind of character of the involved persons necessary?

[…explaining the question…]

M4: I think there has to be someone within the organisation and he is someone – preferably lots of people who ensure that fairly strict ethical structure is adhered to- or the philosophy of the organisation

GK: Are there certain characters to be excluded?

M4: Yes, well I think you have to have a balance. It can't be profit at all cost. There has to be a definite care for patient outcomes and I think if you work with the right medical professionals that would be inherent. So I think actually staff is very important; and that should be accessed before you appoint them.

GK: ok that leads to the third question..

3. What or who could regulate the 'right kind of' character of the involved persons?

There are certainly lots of pre appointment assessments with psychologists that can help you be assessive if someone seems to be along the right path. I think you need to do audits abou the business.

GK: Who could do that? And who could regulate it, once it is set up?

M4: well it really depends on who runs the corporation, because … well there are some corporations where this certainly would not be a good model.

GK: ok, but who could regulate it?

M4: I certainly know it for Australia: there are certain auditors, who come into businesses. So people, who are doing the funding…you know, so if it is not completely patient paid…so many countries have regulators. But you could

also, if you have an external auditor you could finance etc…Perhaps with the structure you could have a system where you are regularly audited.

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

GK: […explaining]

M4: I think there are definitely cultural differences. But I think there are underlying principles on which you should adhere to world wide. You know there are lots of…like the world health organisation… have some principles that are universal. So there are some universal principles that should be adhered to, regardless to from where people are from, with adaptations for cultural norms.

GK: Would you see these adaptations are to be done minorly or are they major?

M4: Well you have to have a respect and anawareness for cultural differences, but they can't degrade basic human principles.

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

M4: I could see there could be a conflict for many, but it really shouldn't. So, if you have an organisation that is purely run by the desire of making profits, then I really don't think those organisations should run their own clinics.

GK: Again, with respect to that question. Would the conflict in our set up differ to a private practitioner?

M4: No I think you've got the same issues on different scales. I mean why would a clinic that's run by a company be any less ethical than an individual?

GK: Is there either or which would have a higher conflict of interest?

M4: We might have more checks and balances in a larger organisation..

GK: that's better or worse…?

M4: I would say it would be better, quite frankly.

6. What are the potential risks and benefits for patients?

M4: The risks are that the patients might attend a clinic that is not ethical, that is unscrupulous, and will not give them good genuine advice and treatment. So that is a risk. But the benefit with working with a larger clinic, that you…generally have a well-resourced organisation looking after your care. That it is going to continue for a period of time; That we have a lot of experience. So

GK: Let's change to a bit different topic, which is organisation..

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

GK: [...explains…]

M4: The stakeholders are the patients, the clinical staff, the administration staff, stakeholders in the organisation,

GK: How about health insurances and so. Do you think they need to be addressed?

M4: Yes, so funding bodies are affected. I mean it's a huge amount of people…. The governments…you need to work with their regulations and their health systems in whatever area.

GK:..and internally in our company? Who would you involve? How would you need to address? [...explains…]

M4: Well, I think you need a very reliable management team that can help you with your decision making. And be alert to potential benefits and challenges. So that you've got a multitude of opinions coming in…looking at it from all angles.

GK: … very political answer

M4: Oh, thank you

8. What are your specific thoughts on competition of the venture? How would you compete?

Imagine you would set up such a clinic in, I don't know, in Indonesia.

M4: I think competitors would be other manufacturers, people offering the same or similar products to what you offer. Competitors would also be people running similar businesses and providing services to patients.

GK: And how would you compete with them?

M4: Obviously you would look after patients who would potentially go to the, or use their product.

GK: How would you distinguish to the competitors?

M4: Well you will be hoping to provide best services possible and if there was already a well-structured service in hah area, where your product were offered in a very open and honest way. I think you wouldn't need to set up a business there, I think.

GK: Would you compete on price?

M4: I wouldn't think so, because the private business. Perhaps the private businesses and hospital businesses – they are rally customers still of your company..soo.

GK: So, would you compete on price?

M4: Well I guess […not understandable…] go overcharging. But I think you need to charge a fair price...not to run them out of business.

GK: Would you see yourself as a competitor, if I would go, let's say Adelaide and set up a clinic? Talking about internal competition.

M4: I would hope you would actually be my customer, not my competitor. I would organise it as such. And probably think you wouldn't do terribly well, there's already a really good service there

GK: This was just a thought whether there is internal competition or not.

M4: Yes, that's a really good question. I mean, because there can be

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

GK: […explains…]

M4: I would probably develop a model that could be derived for a variety of countries, but I would have it run by the specific areas. Following a general principle, a bit like having , say, McDonalds. It's in different countries. Have

slightly different food, but there's some very strict standards there that need to be adhered to. So I would try to have a model that can be adapted to a particular environment that is pretty much intact. But you would also need a, like a business unit, that was able to provide support from head office to ensure there is sort of a basic uniformity with all the patients […word not understandable…]

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: […explains…]…setting it up and once it is set up how to continue leading…

M4: First of all I would be interested in finding out how similar ventures were run in other countries; and the differences between them..

GK: There is no examples…

M4: I would get a core team of supporters from my own group or maybe employ a few other staff to help with the structure and the planning…and give leadership and my input into how I think it would go. But I would look into other business models to see what had been successful etc… So probably I would have this team also reporting back into what …it would suit…The different environments, where you want to place these businesses in…We would have to deal with the stakeholders and make sure this was something which is possible to have in that area. So you would need your core team who would looking at…to see if it's physical possible. I think you have to deal with various stakeholders like government etc… to see if it was possible,

GK: Yes….if you think of leading it…thinking of innovation in a sense of bringing new ideas into life…prosperous and money-efficient and – effective…would you see that leadership as a team effort rather-as a democratic effort rather – or as a person related effort rather.

[1] At this point a short oral description on different leadership styles is provided to the participants

M4: Yes, I couldn't really see this completely democratic…because you want buy-in from the team. But really there need to be some direction that it would happen. So….

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

M4: I think the manager should make the final decision, because I would be the one who would need to wear the consequences of decisions; Whether they were made by me or by members of my team. However, I would want team. Team members input to help inform me to guide those decisions because you will find within your teams that you do have individuals who have particular insights or expertise. So you are crazy not to take that on board. But finally the ultimate decision does lie with the manager, because they are the one's who are...[….responsible..]

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

M4: Well I think with our company we have a very different leader, who actually does seem to take input from the various specialists and professionals, who work here. It's good to have a leader. For a company to actually […not understandable….] have leaders …there's actually no doubt about which direction it is going. But definitely the team needs to feedback if things are working or not. Bu this could be done in a strong but respectful way.

GK: This tension of driving harmony and driving change that is distorting harmony. How can that be managed, besides asking for feedback? Can it be managed? Can it be overcome?

M4: Well I think good management theory helps with this. If you inform the team as to why changes happen and why change has to happen… and if you can get buy-in from the internal stakeholders then change can happen, with quite a large degree of harmony. I think by actually having the team actually help decide what changes need to happen- it's not it… doesn't mean they're going to make complete decision…but you know there's a feeling of responsibility or some involvement in the decision making, then change can happen.

GK: And the tensions can be overcome?

M4: Absolutely

GK: Thank you

Transcript Semi-structured Interview

Manager 5

Dissertation: The Ethics in Radical Innovation:
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1. Corporation M has established their own clinics, offering everything a patient needs under one roof. How do you comment this venture under the moral perspective?

M5: I think it's an excellent thing to do.
GK: How is it morally… to be seen
M5: …that we can provide outcomes for patients by interacting with them directly.
GK: Is it morally sound or not sound
M5: I believe it is morally sound, because our intention is to improve care for patients.

2. Is there a certain kind of character of the involved persons necessary?

[…explaining the question…]

M5: I think they should be patient focused and not having an overriding profit making native.
GK: something else?
M5: ..that they should be competent and qualified to do the jobs they're doing
GK: certain characters that should not be involved?
M5: people who really just want to make money.
GK: alright.

3. What or who could regulate the 'right kind of' character of the involved persons?

M5: mmh that's interesting. I guess…you could either have it as the director of the programme, for example yourself, because, personally I would hope you are in the highest ethical esteem….and I would be confident you would make the appropriate decisions. The other thing you could do is o compose a board. So you would have different perspectives…medically or clinically qualified people. So you have all people's involvement.

4. Ethical norms vary around the globe. How would you (if at all) adapt ethical measures in different places in the world for this venture?

GK: […explaining]
M5: This was something on the questionnaire which I also had to give some thought to. So for example in the UK, medical organisations are in the majority under the NHS, which is quite a different system, ethically, than a private perspective. I really acknowledge, especially in medical ethics, and, the provision of medical care is different. I think you would use the dominant provision as the norm. For example there are things that might be considered ethically acceptable in the US that would not be ethically acceptable in the UK. As a first thought, not having thought about it too deeply, I would use the established medical provision route as the benchmark.
GK: Would you consider those variations minor or major?
M5: IT#s not something I am expert on. I would expect they would be minor. I won't think, on my experience in the medical industry or health care systems,

that there are any major differences. But I can't calibrate, because I am not knowledgeable enough.

5. How would you describe (if existent) the conflict of interest between the Hippocratic Oath and the economic goal of profit seeking?

M5: The Hippocratic Oath as far as I understand is doing no harm…

GK…yes, under no circumstances…

M5: Yes. However, I know from my [...not understandable...] years from the medical industry that a certain amount of harm is factored in to the risk benefit calculation. For example, I have personally experienced the working on clinical trial, where one of the measures were that we were observing how many patients would die. So I know the extreme. Especially in clinical trial work, you have to consider some very adverse outcomes as part of the expected possibility…and you need to know that the work you do brings sufficient benefit that those outcomes are within an ethically acceptable range. So, for that circumstance we had a drug that was going to be so effective [that it would] safe lives, but it was expected that some patients would die.

GK: So, is there a conflict of interest? [repeats the question again]

M5: Mmmh, I think at their extremes they are mutually exclusive. We have to operate in the middle ground.

GK: so you think this conflict is there and can be overcome?

M5: I think it can be overcome. I think it's all about risk-benefit. And I think at the extreme the patient benefit has to outweigh money completely in my mind then. And I believe that is one of the things about Med-EL that is that the patient benefit ultimately outweighs the profit. But I know there are medical sectors where that might not be the case.

6. What are the potential risks and benefits for patients?

M5: In terms of us running clinics??

GK: Yes

M5: to me the very substantial patient benefit is: we are more experts in technology provision. I believe we can achieve much better outcomes for patients...and that is probably in the majority of healthcare assessments… So

for example, if I had to choose between any British audiologist to map me as a cochlear implant patient or an expert MED-EL clinical engineer… I know I would get a better fitting from a MED-EL person.
GK: and what are the risks?...the potential risks?
M5: The risks are that we only provide our products…and we don't consider whether there are alternatives provided by other companies that are more suitable for the patient. However I believe that any MED-EL colleague, certainly in the UK…if they thought a patient should have another company, they would recommend that being explored instead.

7. Imagine it would be your firm: Who do you consider to be affected & involved stakeholders that need to be addressed included or competed with?

GK: [...explains…]
M5: If I first think about the UK perspective, given that every country probably is a little different, I think the stakeholders in the UK would be our existing customers. You would have to position this offering within a framework of the current business you do. What could come out of it is that you lose other transactive business. In the UK a stakeholder might be NGH, because they have any […not understandable…] provider. So it might be that you offer the government this as an alternative to their models of the governmental healthcare system. Other stakeholders would be the potential patients or customers... And the MED-EL colleagues who work in it… And, depending on the country, there might be professional bodies or legal stakeholders that have to do with medical practice. So you, if you look at South Africa, you have to have the medic as the chairman or the principal. But primarily it is the healthcare provision in each country and the patient and the MED-EL colleagues who operate there.

8. What are your specific thoughts on competition of the venture? How would you compete?

M5: Thinking of the UK perspective […] we would compete in terms of giving a better service, which might be demonstrated by better outcomes and maybe

better timelines…Because the patients can wait a long time for a better treatment. And, in a cost constraint government system we might also be able to deliver the kind of whole-life-cost much cheaper than the government care system does. So in terms of making a competitive offer in the UK those would be the things I would think of. In another country like South Africa it might be about equity of access. There are geographic regions where access to our technology is poor…then if we set up a clinic offering it might increase the net-health accessibility for the left population. So in terms…there might be no competition.

GK Ok.

9. Again, imagine it would be your corporation, how would you organise the venture internally? What positive or negative effects would you (or have you) expect?

GK: […explains…]

M5: I think I would set it up somehow separate from the current business…and to do that, to give it own focus and culture. Because it requires – although I would hope we're all patient focused within MED-EL – we are also commercial proper as businesses. And I think it has a higher [degree] to patient care….So I would set it up as separate. I would want to makes sure that the senior management had relevant experience…Potentially looking for something similar, because there are other industries that offer direct patient care…dialysis and things… It wouldn't be completely beginners doing it…

GK: what would be positive or negative in separating it?

M5: I think positive is that you could have a clear patient-before-profits ethic, which I hope we have in our commercial business…but I think you need to recognise…

GK: and negative?

M5: Negative…You might lose expertise existent in the broader company. You could potentially come into conflict with the overall organisation's aims and missions. You might not have sufficient funding. Yu would have to be well resourced…appropriately resourced. I think, on balance, I kind of separation would be beneficial though.

10. You know our corporate culture well. How would you lead such a venture of setting up company owned clinics in this given corporate environment? Autocratic? Democratic? Situational? Value based?[1] What are the pros and cons?

GK: […explains…]

M5: I think….you use the word situational – I think that would be very relevant – depending on the segments of the business. I think he overall leadership- the top-level leadership would have to be directive in some sense, because you try to achieve very specific aims that cannot be compromised. So, for example, if you focus an ethical perspective, patient safety, the fact that we would recommend a priori what is best for the patient. To me those are directive. But I think the other things are more in context…maybe require different approach and skills-set.

11. Decisions in innovational projects can be made by leaders and/or through whole teams. Imagine you would lead this venture. What are your thoughts onto team orientation in decision making in the given situation? Who should make the important decisions?

M5: It depends how the business is configured. I could imagine if it was kind of directive approach where each segment of the business has ahead who is appropriately qualified and knowledgeable… So with MED-EL UK we really have three directorates: We have the commercial directorate, the technical or clinical directorate and the operation's directorate. And even though I am managing director and have really the final say, if necessary, by largely the director ahead make the appropriate decisions. Because […name of the clinical director…] knows more than me in terms of clinical decisions.

GK: if you now would be the head of setting up clinics – and this is an innovational process – who should make the important decisions? Is it a team, is it you or is it a kind of sub-directors?

[1] At this point a short oral description on different leadership styles is provided to the participants

M5: I would say it would be sub-directors who ar knowledgeable for each of the directorate. A managing director's job is about business continuity and choosing what is right for the business. So I think decisions on patient's safety or the patient perspective need to be made by someone who is appropriately qualified to understand that. In a British context what a Managing would do, is, check if that would be in conflict with the business… so to give you an example: Cambridge wanted a patient maintenance plan, which reigned from a patient perspective and from a hospital cost-saving perspective, but it could've bankrupted us…so the kind of ultimate decisions the managing director may make.

12. Corporation M has a harmony seeking culture on one hand. On the other hand, as you know, we seek to be the innovation driver, as in this venture of setting up company owned clinics. This causes tensions, inertia and organisational resistance: In your experience: How can this tension be managed? What other insights or comments do you have on this type of issue?

M5: In my experience…the culture of MED-EL—we have the patient at the forefront. So although everybody might fight for their own little kingdom, we all attempt to what is ultimately best to the patient – and the benefit of technology: So if I think of our relationship…if a MED_EL clinic in the UK would bring better benefit to the cochlear implant population here and allow us to reach more patients with our technology – our technology is superior to the competition's technology and would bring better benefits -- even if the clinic would compromise the commercial business in the UK – the fact that there would be greater patient benefit should be a goal that overrides the individual …

GK: but what kind of tensions would you expect or see?

M5: well in a scenario like that you could expect a tension that the commercial company could become less the driving force in the market. That might affect people's egos; people's job security…

GK:… talking about internal tensions, right…?

M5: Yes, for example, if a MED-EL clinic would diminish the stature and job security of people in MED-EL UK that would create interpersonal tensions in the company…people having fight for their status quo in their situation and not wanting to go backwards.

GK: So do you see there are tensions around? Or could be around?

M5: I have to say, Gordon, not that I have observed.

GK: Imagine I would come over to UK and open a clinic…in Manchester…what could be the tensions?

M5: The tensions could be…I would believe there would be and adverse impact into our business…and I didn't want that adverse effect in the UK company. So the tension would basically…we would argue about priority in terms of the best MED-EL approach in that geography. And either we would rationally debate it, looking into all relevant factors and come to kind of a negotiated conclusion. Or ultimately, if we couldn't, probably Inge [our CEO] would tell us what was happening…I could imagine such an outcome

GK: Do you think such a tension can be overcome?

M5: Yes I do, because I think professionals have to step away from the personal side and look at it in terms of what is best for the overall business; and within MED-EL, given our patient focus, I would hope we would focus on what … which mechanism is going to drive the greatest patient gain.

GK Alright, thank you